

Appendix B

Air Modeling Results

Airborne Effluent Modeling for the Remediation of the PM-2A Tanks and the TSF-03 Burn Pit Excavation Efforts

B-1. INTRODUCTION

Remediation efforts for the PM-2A tanks and the TSF-03 burn pit will require that radioactive material and other hazardous material handling requirements as defined by the Department of Energy (DOE) are strictly adhered to and that airborne effluents resulting from these operations are restricted to within quantities that do not violate the Bechtel BWXT Idaho, LLC (BBWI) Air Toxics Inventory effluent limitations. The following analysis, conducted with the CAP88 (Ref. 1) and SCREEN3 (Ref.2) computer codes, conducted in accordance with the recommendations of the state of Idaho Air Quality Modeling Guidelines (Ref. 3), illustrates how the airborne effluent from the remediation operations will compare with the applicable limiting airborne concentrations of the respective hazardous materials. The analysis supports the Operable Unit 1-10 Remedial Design/Remedial Action Work Plan for the Technical Support Facility (TSF)-26 and TSF-03 sites at the Test Area North (TAN) of the Idaho National Engineering and Environmental Laboratory (INEEL).

The remediation efforts for the PM-2A tanks will require the packaging and disposal of the sludge and overlying layer of diatomaceous earth contents of the two tanks. The sludge material, estimated to amount to 8400 liters for both tanks, contains significant quantities of radioactive material and minor amounts of other hazardous material. The overlying diatomaceous earth was spread into the tanks in 1982 to absorb the liquid contents of the tanks and also contains radioactive and other hazardous material. The proposed method of disposing of the sludge and diatomaceous earth is to remove the overburden above the tanks to the extent that the tanks can be cut horizontally so that the tank tops can be removed to enable the tank contents to be removed, packaged, and disposed. The operations are to occur at a location northwest of TAN-607 and are projected to occur during the summer months of June, July and August, 2004, and for 10 hours per day for four days per week. At this location, the effluent release point for both remedial operations of the PM-2A tanks and the TSF-03 burn pit is about 800 meters (m) away from the closest point on Highway 33 where a member of the public could temporarily be located and, thus, potentially exposed to effluent resulting from the operations.

B-2. PM-2A TANKS

B-2.1 Radiological Material Release Considerations

Operations to remove the material from the tanks will involve putting the material into an airborne state, vacuuming the material from the tanks and confining the airborne particulate material from the air stream for disposal. Effluent from the operations will be filtered by a High Efficiency Particulate Air (HEPA) filter that is capable of removing 99.97% of the particulate material from the effluent stream. The projected effluent rate through this filter is 1000 to 1900 cubic feet per minute (cfm). For modeling purposes, the amount of radioactive material and other hazardous material assumed to be released to the environment is 0.03% of the total amount contained within the two tanks. The radionuclides and their respective quantities, derived from sampling operations conducted in September 1996, are described in Table B-4 of reference 4 and are documented in Table B2-1 for reference to the following effluent release calculations. Although there has been almost 7 years for radioactive decay to reduce the radioactive inventory in the tanks, the reference 4, Table B-4, quantities were used for this analysis. Thus, radiological consequences described in this analysis will be slightly conservative.

Table B2-1. Radiological material parameters for the PM-2A Tanks remediation operations.

Radionuclide	Total Curies in Tank	Total Curies Released
U-233	2.173E-2	6.519E-6
U-234	2.265E-2	6.795E-6
U-235	8.183E-4	2.455E-7
U-236	1.533E-4	4.599E-8
U-238	1.722E-4	5.166E-8
Pu-238	1.984E-2	5.952E-6
Pu-239	2.541E-2	7.623E-6
Pu-240	2.541E-2	7.623E-6
Am-241	5.561E-3	1.668E-6
Th-228	7.079E-4	2.124E-7
Sr-90	5.248E+1	1.574E-2
(Y-90) ^a	5.248E+1	1.574E-2
Co-60	2.896E-1	8.688E-5
Cs-137	1.479E+1	4.437E-3
(Ba-137m)	1.399E+1	4.197E-3
Eu-154	7.943E-2	2.383E-5
Ni-63	4.586E-1	1.376E-4

a. Radionuclides in parentheses are not included in the reference 4 table, but are present in the tanks because their respective radioactive "parent" nuclides Sr-90 and Cs-137 are present.

B-2.2 Analytical Meteorological Considerations

Since the remedial operations are to occur during the daytime hours, the release to the environment will occur during the time when a "lapse" meteorological condition is most likely to occur (Reference 5). As pointed out in Climatology of the Idaho National Engineering Laboratory (reference 5), daytime hours are generally characterized with a "lapse" meteorological condition while the nocturnal hours are characteristically of an "inversion" meteorological condition. Since this dispersion condition will occur only during the daytime hours and thus impact the northern end of the INEEL site, a meteorological file that corresponded with the proposed operational period was requested from the National Oceanic and Atmospheric Administration (NOAA) for purposes of predicting the radiological consequences of the atmospheric release. The meteorological file (TANSTAR.str) that NOAA supplied, provided a 10-year period (1993 – 2003) of hourly met data for the months of June, July and August for the daily period of 8:00 AM to 6:00 PM MST. The TANSTAR.str file was the file that was used with CAP88 to determine the dose for the maximally exposed individual and the meteorological sector corresponding to the maximum dose. It is of interest to note that this file contained no data for the Class E and Class F weather conditions, which corresponds with a weak and a strong inversion condition, respectively. The effluent release was conservatively assumed to be via a small 10-inch (in) diameter stack, the top of which is only 1 m off the ground. Since the terrain where the remedial work is being performed is relatively flat and unobstructed between the release point and a point on Highway 33, where a member of the public could be positioned for several hours, no credit is taken for wind turbulence of any kind or effects that minor differences in elevation of the source point and the elevation of the dose receptor. Lack of credit for either of these factors, although they may be small, will maximize the radiological consequences to the dose receptor.

B-2.3 Results of the Effluent Release Modeling

The results of calculations made with the CAP88 code indicated that the maximally exposed individual would be located in the NE meteorological sector. Projected annual radiological doses for locations around and at the INEEL boundary are provided in Table B2-2. The tabulated locations were provided by BBWI with a file (perim_TAN.txt), and the request was to provide a radiological dose for each of the locations. The CAP88 code calculates the annual radiological dose and provides output for the maximally exposed meteorological sector. The option is provided for calculating the air concentrations for all of the 16 meteorological sectors for the distances provided under the option of choosing an "individual" or "population" type calculation. Therefore, for obtaining the doses for a particular distance for a given sector, that dose has to be determined by the ratio of the respective concentration to the concentration for the sector where the dose is provided. This ratioing technique has been used to determine the doses for all sectors not provided by the code. Because of the number of radionuclides included in the analysis, two CAP88 runs were made for each of the three groups of distances. Since other similar analyses have shown that chain daughters for the actinides (for some nuclides of uranium) do NOT increase the radiological consequences to the dose receptor, these chain daughters have not been included in this analysis.

Inspection of the table shows that location 19 (NE meteorological sector) has the highest dose at 5.9E-4 mrem/yr. CAP88 also predicts that an individual at the Frenchman's cabin (location #1) would receive a dose 5.3% of this maximum dose. Review of the data by NOAA indicates that the doses at the south end of the site are substantially higher than expected.

If the two remediation operations are performed for both PM-2A tanks simultaneously, the effects are additive since the two operations are physically close to each other. Although the non-radiological hazardous material concentrations would be greater than the allowed limiting concentrations, a wind sock could be erected at the site and operations could be performed when the wind is out of the southwest. Operations would be hampered only infrequently because of the INEEL climatology.

Table B2-2. CAP88 predicted annual radiological doses (mrem/yr) for positions located on the INEEL site boundary.

Location	mrem/yr	Location	mrem/yr	Location	mrem/yr
1,8,54611 ^a	3.1E-5	21,15,14258	5.5E-4	41,12,27275	7.4E-6
2,7,58610	6.3E-5	22,15,15844	4.7E-4	42,12,27389	7.4E-6
3,6,47969	5.7E-5	23,14,13959	8.6E-5	43,12,28919	7.4E-6
4,6,50024	5.5E-5	24,14,13286	9.7E-5	44,12,31060	6.3E-6
5,6,35279	8.6E-5	25,14,11103	1.2E-4	45,12,37729	5.2E-6
6,6,24430	1.3E-4	26,14,10590	1.3E-4	46,12,36809	5.4E-6
7,6,18890	1.8E-4	27,13,10472	3.3E-5	47,12,35683	5.6E-6
8,6,15784	2.3E-4	28,13,10365	3.3E-5	48,11,34577	8.6E-6
9,1,19860	8.6E-5	29,13,10344	3.3E-5	49,11,32802	9.7E-6
10,1,21349	7.4E-5	30,13,11989	2.7E-5	50,11,39559	7.4E-6
11,1,23521	6.9E-5	31,13,13245	2.4E-5	51,11,43584	6.9E-6
12,16,22159	1.5E-4	32,13,13664	2.3E-5	52,11,46668	6.3E-6
13,16,21314	1.7E-4	33,13,13612	2.3E-5	53,11,45654	6.3E-6
14,16,19891	1.8E-4	34,13,15241	2.0E-5	54,10,36721	3.0E-5
15,16,18834	1.9E-4	35,12,17329	1.3E-5	55,9,39220	9.7E-6
16,16,16323	2.4E-4	36,12,20457	1.1E-5	56,8,45677	3.9E-5
17,16,15441	2.7E-4	37,12,18860	1.2E-5	57,8,45196	4.0E-5
18,15,14374	5.4E-4	38,12,24545	8.6E-6	58,11,39079	7.4E-6
19,15,12522	5.9E-4	39,12,25171	8.3E-6	59,9,45275	8.0E-6
20,15,13483	5.7E-4	40,12,26794	8.0E-6	60,13,17035	1.8E-5

a. Location notation = Location #, Meteorological sector, distance (m); Location #1 = Frenchman's cabin; Sector 15 is the maximally exposed sector

B-2.4 SCREEN3 Modeling Considerations

Although meteorological sector No. 15 (NE) is the sector identified by the CAP88 code for the maximally exposed individual, other sectors have the potential for radiological exposures. The annual radiological dose for these other sectors should be and is, however, less than that dose for the NE sector. The locations provided in Table B2-2, above, are locations where individuals could possibly be located for a year's period of time. The radiological doses therefore reflect the four major exposure pathways, i.e., inhalation, ingestion, ground deposition, and cloud gamma. There are locations within the boundary of the INEEL where a member of the public could be positioned for a short (a matter of hours) period of time. These locations correspond with the locus of points defined by Highway 33 across the north end of the site. The shortest distance from the point of remedial operations to the highway is about 800 m. Because these potential individuals are only at that location transiently for a short period of time, their exposure is only from the inhalation exposure pathway and the code used for this pathway is the SCREEN3 code. It should be mentioned that individual exposure for this location on the Highway 33 is an unlikely exposure since the probability of the wind directed in this direction from the point of remedial operations is low.

As suggested by "Screening Procedures for Estimating the Air Quality Impact of Stationary Sources, Revised" (Ref. 6), a "phase 1" screening analysis was done to determine if there are any air quality problems associated with the PM-2A tank remedial operations. This phase 1 procedure is a simple, conservative estimate that determines if a more sophisticated analysis is required. The analysis was performed using the SCREEN3 code using conservative parameters applicable to the remedial operation.

Several input parameters are required for the SCREEN3 model. The rural option was selected, as was a receptor height of 1.0 m. A conservative stack height of 1.0 m was used. The inside diameter of the stack was considered to be 10 in (0.25 m); the anemometer height was varied from 10(default) to 19.9 m; and anemometer height wind speed was 4 to 7 m/s. The non-regulatory but conservative Brode 2 mixing height was selected. With effluent rates of 1000 to 1900 cfm, the exit velocity out the stack varies from 9.9 to 17.8 m/s. Since an effluent rate of 1000 cfm (a stack exit velocity of 9.9 m/s) will maximize the resulting downwind concentration, that stack exit velocity was used in the analysis. The materials listed in Table B2-3 are the hazardous materials considered for this analysis. The release rate for a material is input (in this case, arsenic was selected), and the concentration at Highway 33 is calculated. The concentrations for the remaining materials are then calculated as ratios based on their release rates. The HEPA filter will reduce the hazardous materials by the same fraction as considered for the radioactive material particulates, i.e., 0.03% of the total quantity will be released to the environment. As suggested in the screening procedures reference (Ref. 6), a Class D weather condition with a high wind speed of 4 m/s was used for the analysis to determine the worse case consequences. (It should be noted, however, that the recommendation for using this Class D meteorological condition is not appropriate for the INEEL and NOAA has recommended that a Class F be used for determining the maximum potential concentrations.)

Results of the analysis are provided in Table B2-3. The limiting values from the Idaho Code, IDAPA 16, Sections 585 and 586 are also provided (Column 5, AAC). These limits are the lesser of the values provided in IDAPA 16, Sections 686 or 586 for the respective materials or forms of those materials. The SCREEN3 model runs are attached for reference.

B-2.5 Conclusions of the PM-2A Tanks Air Effluent Modeling

Radiological consequences at off-site locations resulting from the PM-2A tank remedial operations were analyzed with the CAP88 code and show that the maximally exposed individual in the NE meteorological sector is well within the 1 mrem/yr acceptable value for a single facility at the INEEL. The resulting maximum radiological dose predicted by the code for this operation is 5.9E-4 mrem/yr for an individual residing at the site boundary in the NE sector. Radiological doses calculated by the code for the south site boundary are considered to be higher than expected considering the INEEL site-specific meteorology.

The SCREEN3 code was used for the analysis of potential public individual exposure at a location on Highway 33. As previously discussed, the Highway 33 concentrations tabulated in Table B2-3 are infrequent occurrences and are anticipated to be of short duration. All of the calculated concentrations, calculated with conservative parameters, are below the respective limiting concentration except for chromium. Although the calculated concentration is only 1.5 times the "acceptable ambient concentration for carcinogenic" materials, the conservative parameters chosen for the analysis as well as the low probability for occurrence may allow the operation to proceed. For example, if the more probable wind speed of 7 m/s were used in the analysis, the predicted concentration would be 6.5E-5 $\mu\text{g}/\text{m}^3$. (See attached SCREEN3 output.) Also, if the more probable effluent rate of 1900 cfm were used in the analysis, the predicted concentration would be 1.2E-4 $\mu\text{g}/\text{m}^3$.

Table B2-3. Hazardous Material Parameters for the PM-2A Tank Remediation Effluent Analysis.

Material	Total Quantity in Tanks (g)	Release Rate (g/s)	Highway 33 Concentration (ug/m ³)	AACC ^a (ug/m ³)
Aluminum	14,935	2.6E-6	1.8E-4	1.0E+2
Antimony	62	1.1E-8	7.5E-7	2.5E+1
Arsenic	183	3.2E-8	2.2E-6	2.3E-4
Barium	453	7.8E-8	5.4E-6	2.5E+1
Boron	85,344	1.5E-5	1.0E-3	5.0E+2
Beryllium	300	5.2E-8	3.6E-6	4.2E-3
Cadmium	892	1.5E-7	1.0E-5	5.6E-4
Chromium	11,039	1.9E-6	1.3E-4	8.3E-5
Cobalt	30	5.2E-9	3.6E-7	2.5E+0
Copper	1,791	3.0E-7	2.0E-5	5.0E+1
Iron	128,905	2.2E-5	1.5E-3	4.0E+1
Lead	2,640	4.5E-7	3.2E-5	1.0E-1 ^c
Manganese	27,560	4.7E-6	3.3E-4	5.0E+1
Mercury	1,005	1.7E-7	1.2E-5	5.0E-1 ^b
Nickel	10,713	1.9E-6	1.4E-4	4.2E-3
Silica	2,907	5.1E-7	3.7E-5	2.5E+0
Silver	1,027	1.8E-7	1.3E-5	5.0E+0 ^b
Thallium	141	2.4E-8	1.6E-6	5.0E+0
Tin	108	1.8E-8	1.3E-6	1.0E+2
Vanadium	89	1.5E-8	1.0E-6	2.5E+0
Zinc	4,445	7.6E-7	5.1E-5	5.0E+1
Aroclor 1254	164	2.8E-8	1.9E-6	1.0E-2
Aroclor 1260	217	3.8E-8	2.6E-6	1.0E-2

a. Acceptable ambient concentration of carcinogens.

b. Acceptable ambient concentration of non-carcinogens (AAC values).

c. Pb limit taken from Table 7, Reference 3.

In the event the remedial operations take only a month to be completed, the anticipated concentrations predicted by the SCREEN3 code could be a factor of three (3.0) higher than presented in this analysis.

As stated by IDAPA 16, Section 585: "The AAC in this section are twenty-four (24) hour averages." This statement and the respective limiting values presented in Table B2-3 apply to mercury (Hg) and silver (Ag).

In the event that reduced operating times are shorter than the anticipated 3-month period or the burn pit remediation operations are performed at the same time as the PM-2A Tanks remediation, a wind sock erected in the area could be used to assure the location at Highway 33 is not exposed. Based on INEEL historical meteorology, operation of the remedial work only when the winds are out of the southwest would only hamper the operation infrequently, if at all.

B-3. TSF-03 BURN PIT REMEDIATION AIR EFFLUENT MODELING

Since the TSF-03 burn pit is in the same general area as the PM-2A Tanks, the distances to any potential public individuals will be the same as for the PM-2A tanks remediation effort. Airborne effluent modeling for the burn pit remediation will not result in a continual steady release as was the case for the PM-2A tanks remediation effort, but will be a fugitive dust generation of varying rates because of the non-homogeneity of the burn pit. The burn pit is an assemblage of ash from different materials located at different depths within the burn pit, i.e., releases from the remediation of this pit will not be steady and continuous. Also, the pit remediation efforts will only last for a short period of time. For the purposes of this analysis, the pit remediation will be assumed to last for a period of a week, i.e., a four day period of 10 hours per day. The estimate of the fugitive dust particle distribution associated with the burn pit remediation will follow the same methodology as for the emission calculations for the TAN site TSF-06, Area B, and for TSF-26. This methodology is described in the 1998 version of AP-42 (Ref. 7).

B-3.1 Methodology

The method to estimate fugitive dust particulate matter (PM) was adopted from AP-42, Chapter 13 (EPA 1998, Ref.7). The dust is assumed to be generated by the front-end loader and the backhoe that are used within the burn pit. Since they are within the burn pit when the dust is generated, the speed will be low since the burn pit is only about 26 feet by 64 feet. The majority of the dust is expected to be generated in the pickup and dropping of soil/ash during excavation/loading. The PM₃₀, PM₁₀, and PM_{2.5} distributions, calculated as described in AP-42, Section 13.2.2, "Unpaved Roads", were then converted to the appropriate emission rates. The PM₃₀, PM₁₅, PM₁₀, PM₅, and PM_{2.5}, distributions were calculated for the "pickup and dropping" of soils as described in Section 13.2.4, Aggregate Handling and Storage Piles of AP-42, added to the previously described distributions, and input to the CAP88 code for describing the radiological consequences at the site boundary and input to the SCREEN3 code describe the hazardous material concentrations at the nearest location on Highway 33.

B-3.2 Assumptions

The following assumptions were used in the analysis:

- The remedial action will occur sometime during the months of June, July, or August and will take a week to complete.
- The silt loading of the material in the burn pit is somewhat less than that of soil in the immediate vicinity, i.e., less than 8.07 % which is an average for the TAN soils.
- Wind erosion within the pit will be minimal once excavation has started into the aged and weathered combustion/silt material of the burn pit. Therefore, wind erosion will not be included.
- The total excavator vehicle miles traveled per hour on the contaminated surface (VMT) is 0.1 miles/hr.
- The moisture content of the material within the burn pit is measured to be 11% (Ref. 8)
- The average wind speed was derived from the TANSTAR.str weather file provided for the TAN area that applies to the period of time during which the burn pit remediation will be completed. The average wind speed 10.1 mph (4.5 m/s) was used for the generation of the fugitive dust particles

during the pickup and dropping of the material. This average value was derived from the CAP88 runs, which is based on the TANSTAR.str met file from NOAA.

The equipment estimated to be used in the excavation of the pit is provided in Table B3-1.

Table B3-1. Equipment estimated to be used in the Burn Pit excavation.

Equipment	No. of Wheels	Weight (lbs)	Number
Backhoe loader	4	13,700	1
Front-end loader	4	36,500	1

B-3.3 Particulate Emissions Calculations

For the equipment listed in Table B3-1, it is assumed that only one piece of equipment can be used at one period of time because of the size of the pit. Therefore, each loader is assumed to be used 50% of the 40 hours that is assumed to excavate the pit and each type of loader will be operated over a distance of 2.0 miles.

The equation applicable to the “unpaved road” fugitive dust generation by the two loaders is:

$$E_f = k[(s/12)^a (W/3)^b]/(M/0.2)^c$$

where:

E_f = size-specific emission factor (lb/VMT)

s = surface material silt content (%)

W = mean vehicle weight (tons)

M = surface material moisture content (%), and where k , a , b , and c are empirical constants provided in 1998 version of Section 13.2.4, AP-42:

Constant	PM _{2.5}	PM ₁₀	PM ₃₀
k (lb/VMT)	0.38	2.6	10
a	0.8	0.8	0.8
b	0.4	0.4	0.5
c	0.3	0.3	0.4

The size-specific emission factors (lb/VMT) calculated by the above equation for the two loaders are provided below:

Equipment	PM _{2.5}	PM ₁₀	PM ₃₀
Backhoe loader	0.115	0.785	5.52
Front-end loader	0.17	1.164	9.02

The particulate emissions from “pickup and dropping” is calculated by the equation:

$$E_f = k (0.0032)[(U/5)^{1.3}/(M/2)^{1.4}]$$

where

E_f = emission factor (pounds/ton)

k = particle size multiplier (dimensionless)

U = mean wind speed (10.1 mph)

M = soil moisture content (11%)

Where “ k ” is a constant taken from Section 13.2.2 of the 1998 version of AP-42:

PM _{2.5}	PM ₅	PM ₁₀	PM ₁₅	PM ₃₀
0.11	0.2	0.35	0.48	0.74

Since the 678 cubic yards is estimated to be about 875 tons of material and, since the radioactive material constituents of the pit are listed in pCi/g, the gram quantity of soil was calculated. The size-specific emission factors for lb/ton, pounds, and grams were calculated with the above equation and are presented in the table below:

Table B3-2. Size-specific emission factors.

Size-specific Emission factor	lbs/ton	pounds	grams
PM _{2.5}	8.07E-5	7.058E-2	32.0
PM ₅	1.47E-4	1.286E-1	58.4
PM ₁₀	2.57E-4	2.160E-1	98.1
PM ₁₅	3.52E-4	3.079E-1	139.8
PM ₃₀	5.43E-4	4.749E-1	215.6

Summing the fugitive dust emissions created by the two loaders (total of 33.55 lbs) and the “pickup and dropping” operations (total of 544 grams) gives 15,776 grams (34.75 lbs). Therefore, the radioactive material parameters applicable to the burn pit are provided in Table 3-3. The values in this table coincide with the ‘average concentration’ values of Table 4-1, of Reference 8.

Inspection of the Table B3-3 quantities shows that the majority of the materials are present in background amounts and that the remaining quantities are present in quantities just slightly above what would qualify them as radioactive material.

Table B3-3. Radioactive material parameters applicable to the TSF-03 Burn Pit (from Table 4-1 of Reference 8).

Nuclide	Conc. (pCi/g)	pCi released
Am-241	0.05	7.89E+2
Sb-125	0.03	4.73E+2
Ce-144	0.10	1.58E+3
Cs-134	0.01	1.58E+2
Cs-137/Ba-137m ^b	0.10	1.58E+3
Co-58	0.02	3.16E+2
Co-60	0.04	6.31E+2
Eu-152	0.05	7.89E+2
Eu-154	0.02	3.16E+2
Eu-155	0.05	7.89E+2
I-131 ^a	0.3	4.73E+3
Mn-54	0.01	1.58E+2
Nb-95	0.04	6.31E+2
Pu-238	0.01	1.58E+2
Pu-239	0.008	1.26E+2
K-40	15.0	2.37E+5
Ra-226	3.0	4.73E+4
Ra-228	1.0	1.58E+4
Ru-103	0.03	4.73E+2
Ru-106	0.1	1.58E+3
Ag-108m	0.01	1.58E+2
Ag-110m	0.01	1.58E+2
Sr-90/Y-90 ^b	0.1	1.59E+3
Th-228	1.0	1.58E+4
Th-230	1.0	1.58E+4
Th-232	1.0	1.58E+4
U-234	1.0	1.58E+4
U-235	0.09	1.42E+3
U-238	1.0	1.58E+4
Zn-65	0.04	6.31E+2
Zr-95	0.04	6.31E+2

- a. The author does not believe that with a radioactive half life of 8.05 days that I-131 is present in the pit.
 b. Ba-137m and Y-90 are also present since the parents of these radionuclides are present.

B-3.4 Results of the SCREEN3 Calculations

To calculate the release rate for the SCREEN3 calculations, a VOC value of 450 $\mu\text{g}/\text{kg}$ was chosen as a basis as discussed below. Since 15.8 kg of fugitive dust is calculated to be released during the week-long operation, 7110. μg , or 7.11E-3 grams of the chosen material (VOC) is released. Over the 40-hour period, the release rate is calculated to be 4.94E-8 g/s. Since the SCREEN3 code requires a release rate that is based on a square meter of the pit, the value 4.94E-8 is divided by 155 square meters, the area of the pit. Therefore, the release rate that is input to the code is 3.19E-10 $\text{g}\cdot\text{m}^2/\text{s}$. All other resulting concentrations are ratioed to arrive at the appropriate concentrations that would apply to the 800 m distance. Two calculations were made with the SCREEN3 code to determine the maximum concentration with respect to the 7.9 m by 19.5 m pit. The resulting maximum concentration was used for tabulating the results.

B-3.5 Results of the CAP88 Calculations

As for the calculations for the PM-2A tank remediation, the CAP88 calculations for the burn pit show the NE sector to be the maximally exposed sector. The nearest individual on the site boundary in the NE sector is located at 13,483 m and the dose for this location is 2.43E-6 mrem/yr.

B-3.6 Results of the SCREEN3 Calculations

Since there are many materials within the burn pit that potentially have hazardous consequences, the resulting 800 m concentration calculated by the SCREEN3 code for the 450 $\mu\text{g}/\text{kg}$ material is ratioed to the $\mu\text{g}/\text{kg}$ pit concentrations for the other materials. Not all of the materials listed in Table 4-1 of Reference 8 are listed. Only the largest of a group is listed, for example 17 dioxin/furans are listed in Table 4-1, but only one, the one with the highest concentration (1,2,3,4,6,7,8,9-OCDD [Octachlorodibenzo {p-dioxin}]) with a concentration of 1.0 $\mu\text{g}/\text{kg}$ is listed in Table B3-4. The SCREEN3 calculated concentration at 800 m for the material with a concentration in the pit of 450 $\mu\text{g}/\text{kg}$ is 2.3E-6 $\mu\text{g}/\text{m}^3$ (see the attached SCREEN3 output listing). As described above, for example, the 800-m airborne concentration of 1,2,3,4,6,7,8,9-OCDD is 5.11E-9 $\mu\text{g}/\text{m}^3$. As shown in Table B3-4, the only material that is above the limiting value is chromium. Since the limiting value for chromium is based on chromium or chromium compounds where the metal has a valence of +6, all of the chromium within the pit probably does not fit this classification. Again, as was the case for the PM-2A tank hazardous material airborne concentrations at 800 m, the probability of occurrence is small at the point of closest approach on Highway 33.

Table B3-4. Burn Pit materials, pit concentrations, SCREEN3 resulting concentrations and limiting values.

Material	Pit Conc. ($\mu\text{g}/\text{kg}$)	800-m Conc. ($\mu\text{g}/\text{m}^3$)	Limiting Value AACCA ^a ($\mu\text{g}/\text{m}^3$)
Cyanide	500	2.6E-6	250
Metals			
Aluminum	15,892,000	8.1E-2	100
Antimony	2000	1.0E-5	25
Arsenic	10,000	5.1E-5	2.3E-4
Barium	230,000	1.2E-3	25
Beryllium	700	3.6E-6	4.2E-3
Cadmium	4000	2.0E-5	5.6E-4
Calcium	83,300,000	4.3E-1	100
Chromium	179,000	9.1E-4	8.3E-5
Cobalt	9000	4.6E-5	2.5
Copper	463,000	2.4E-3	10
Iron	31,123,000	1.6E-1	40
Lead	292,000	1.5E-3	0.1 ^b
Magnesium	13,362,000	6.8E-2	500
Manganese	497,000	2.5E-3	50
Mercury	700	3.6E-6	0.5 ^c
Nickel	120,000	6.1E-4	4.2E-3
Potassium	3,037,000	1.6E-2	100
Selenium	3000	1.5E-5	10
Silver	14,000	7.2E-5	5 ^c
Sodium	1,434,000	7.3E-3	2.5
Thallium	1000	5.1E-6	5
Vanadium	46,000	2.4E-4	2.5
Zinc	412,000	2.1E-3	50
PCBs			
PCB-1262	702	3.6E-6	1.0E-2
VOCs	< 450	< 2.3E-6	> 1.0E-2
DF ⁽¹⁾ (12346789-OCDD)	1.0	5.1E-9	

a. Acceptable Ambient Concentration of Carcinogens.

b. Pb limit taken from Table 7, Reference 3.

c. Acceptable Ambient Concentration of non-carcinogens (AAC values)

⁽¹⁾Dioxin/Furan

B-4. REFERENCES

1. CAP99PC, Version 2.0, U. S. Environmental Protection Agency, Office of Radiation Programs, Las Vegas Facility
2. SCREEN3 Model User's Guide, U. S. Environmental Protection Agency, Office of Air Quality Planning and Standards Emissions, Monitoring, and Analysis Division, Research Triangle Park, North Carolina, 27711, September 1995
3. State of Idaho Air Quality Modeling Guideline, Idaho Department of Environmental Quality, Air Quality Division, Stationary Source Program, Approved December, 2002
4. Hazard Assessment Calculation for Hazard Classification of PM-2A Tanks V-13 and V-14, EDF-4293, by Dean H. Miyasaki, to be published
5. Climatography of the Idaho National Engineering Laboratory, 2nd Edition, by Kirk L. Clawson, G. E. Start, and Norm R. Ricks, U. S. Department of Commerce, National Oceanic and Atmospheric Administration, Air Resources Laboratory, DOE/ID-12118, December 1989
6. Screening Procedures for Estimating the Air Quality Impact of Stationary Sources, Revised, U.S. Environmental Protection Agency, EPA-454/R-92-019, October 1992
7. Compilation of Air Pollutant Emission Factors, AP-42, Fifth Edition, Volume I; Stationary Point and Area Sources, January 1995 (Section 13.2.4) and September 1998 (Section 13.2.2)
8. TSF-03 and WRRTF-01 Burn Pits 2000/2001 Sample Data Compilation and Risk Assessment Report for Operable Unit 1-10, Waste Area Group 1, at Test Area North, U.S. Department of Energy, Idaho Operations Office, DOE/ID-11045, Revision 1, January 2003

PM-2A Tank Remediation

CAP88 Output

Group # 1 Radionuclides

Group #1 Distances

C A P 8 8 - P C

Version 2.00

Clean Air Act Assessment Package - 1988

S Y N O P S I S R E P O R T

Non-Radon Individual Assessment
Mar 11, 2003 07:56 pm

Facility: TAN/PM-2A tanks
Address: INEEL
City: Idaho Falls
State: ID Zip: 83401

Source Category: Point source
Source Type: Stack
Emission Year: 1993

Comments: Calcs. for remediation of PM-2A tanks

Effective Dose Equivalent
(mrem/year)

3.44E-04

At This Location: 10344 Meters Northeast
Dataset Name: Tan/PM2A tanks
Dataset Date: Mar 11, 2003 07:55 pm
Wind File: C:\PROGRA~1\CAP88PC2\WNDFILES\TAN.WND

Mar 11, 2003 07:56 pm

SYNOPSIS
Page 1

MAXIMALLY EXPOSED INDIVIDUAL

Location Of The Individual: 10344 Meters Northeast
Lifetime Fatal Cancer Risk: 7.27E-09

ORGAN DOSE EQUIVALENT SUMMARY

Organ	Dose Equivalent (mrem/y)
GONADS	3.27E-04
BREAST	2.98E-04
R MAR	3.13E-04
LUNGS	4.40E-04
THYROID	3.10E-04
ENDOST	1.02E-03
RMNDR	2.90E-04
EFFEC	3.44E-04

Mar 11, 2003 07:56 pm

SYNOPSIS

Page 2

RADIONUCLIDE EMISSIONS DURING THE YEAR 1993

Nuclide	Class	Size	Source		TOTAL
			#1	Ci/y	
AM-241		W	1.00	1.7E-06	1.7E-06
CO-60		Y	1.00	8.7E-05	8.7E-05
CS-137		D	1.00	4.4E-03	4.4E-03
BA-137M		D	1.00	4.2E-03	4.2E-03
EU-154		W	1.00	2.4E-05	2.4E-05
NI-63		W	1.00	1.4E-04	1.4E-04
PU-238		Y	1.00	6.0E-06	6.0E-06
PU-239		Y	1.00	7.6E-06	7.6E-06
PU-240		Y	1.00	7.6E-06	7.6E-06

SITE INFORMATION

Temperature: 21 degrees C
Precipitation: 25 cm/y
Mixing Height: 1000 m

Mar 11, 2003 07:56 pm

SYNOPSIS
Page 3

SOURCE INFORMATION

Source Number: 1

Stack Height (m): 1.
Diameter (m): 0.

Plume Rise
Pasquill Cat: A B C D E F G
Zero: 0. 0. 0. 0. 0. 0. 0.

AGRICULTURAL DATA

	Vegetable	Milk	Meat
Fraction Home Produced:	0.700	0.399	0.442
Fraction From Assessment Area:	0.300	0.601	0.558
Fraction Imported:	0.000	0.000	0.000

Food Arrays were not generated for this run.
Default Values used.

DISTANCES (M) USED FOR MAXIMUM INDIVIDUAL ASSESSMENT

10344	10365	10472	10590	11103	11989	13245	13286	13483	13612
13664	13959	14258	14374	15241	15441	15784	15844	16323	17329

C A P 8 8 - P C

Version 2.00

Clean Air Act Assessment Package - 1988

C O N C E N T R A T I O N T A B L E S

Non-Radon Individual Assessment
Mar 11, 2003 07:56 pm

Facility: TAN/PM-2A tanks
Address: INEEL
City: Idaho Falls
State: ID Zip: 83401

Source Category: Point source
Source Type: Stack
Emission Year: 1993

Comments: Calcs. for remediation of PM-2A tanks

Dataset Name: Tan/PM2A tanks
Dataset Date: Mar 11, 2003 07:55 pm
Wind File: C:\PROGRA~1\CAP88PC2\WNDFILES\TAN.WND

ESTIMATED RADIONUCLIDE CONCENTRATIONS
AT VARIOUS LOCATIONS IN THE ENVIRONMENT

Wind Toward	Distance (meters)	Nuclide	Dry	Wet	Ground
			Air Concentration (pCi/m ³)	Deposition Rate (pCi/cm ² /s)	Deposition Rate (pCi/cm ² /s)
N	10344	AM-241	3.2E-10	5.7E-17	1.2E-16
N	10344	CO-60	1.6E-08	3.0E-15	6.3E-15
N	10344	CS-137	8.4E-07	1.5E-13	3.2E-13
N	10344	BA-137M	2.6E-10	4.6E-17	1.3E-17
N	10344	EU-154	4.5E-09	8.1E-16	9.1E-16
N	10344	NI-63	2.6E-08	4.7E-15	5.3E-15
N	10344	PU-238	1.1E-09	2.0E-16	2.3E-16
N	10344	PU-239	1.4E-09	2.6E-16	2.9E-16
N	10344	PU-240	1.4E-09	2.6E-16	2.9E-16
N	10365	AM-241	3.2E-10	5.7E-17	1.2E-16
N	10365	CO-60	1.6E-08	3.0E-15	6.3E-15
N	10365	CS-137	8.4E-07	1.5E-13	3.2E-13
N	10365	BA-137M	2.5E-10	4.5E-17	1.3E-17
N	10365	EU-154	4.5E-09	8.1E-16	9.1E-16
N	10365	NI-63	2.6E-08	4.7E-15	5.2E-15
N	10365	PU-238	1.1E-09	2.0E-16	2.3E-16
N	10365	PU-239	1.4E-09	2.6E-16	2.9E-16
N	10365	PU-240	1.4E-09	2.6E-16	2.9E-16
N	10472	AM-241	3.1E-10	5.6E-17	6.3E-17
N	10472	CO-60	1.6E-08	2.9E-15	3.3E-15
N	10472	CS-137	8.3E-07	1.5E-13	1.7E-13
N	10472	BA-137M	2.3E-10	4.2E-17	1.2E-17
N	10472	EU-154	4.5E-09	8.0E-16	9.0E-16
N	10472	NI-63	2.6E-08	4.6E-15	5.2E-15
N	10472	PU-238	1.1E-09	2.0E-16	2.2E-16
N	10472	PU-239	1.4E-09	2.6E-16	2.9E-16
N	10472	PU-240	1.4E-09	2.6E-16	2.9E-16
N	10590	AM-241	3.1E-10	5.5E-17	6.2E-17
N	10590	CO-60	1.6E-08	2.9E-15	3.2E-15
N	10590	CS-137	8.2E-07	1.5E-13	1.7E-13
N	10590	BA-137M	2.1E-10	3.8E-17	1.1E-17
N	10590	EU-154	4.4E-09	7.9E-16	8.9E-16
N	10590	NI-63	2.5E-08	4.6E-15	5.1E-15
N	10590	PU-238	1.1E-09	2.0E-16	2.2E-16
N	10590	PU-239	1.4E-09	2.5E-16	2.8E-16
N	10590	PU-240	1.4E-09	2.5E-16	2.8E-16
N	11103	AM-241	2.9E-10	5.2E-17	5.9E-17
N	11103	CO-60	1.5E-08	2.7E-15	3.1E-15
N	11103	CS-137	7.7E-07	1.4E-13	1.6E-13
N	11103	BA-137M	1.4E-10	2.6E-17	7.6E-18
N	11103	EU-154	4.2E-09	7.5E-16	8.5E-16
N	11103	NI-63	2.4E-08	4.3E-15	4.9E-15
N	11103	PU-238	1.0E-09	1.9E-16	2.1E-16
N	11103	PU-239	1.3E-09	2.4E-16	2.7E-16
N	11103	PU-240	1.3E-09	2.4E-16	2.7E-16
N	11989	AM-241	2.7E-10	4.8E-17	5.5E-17
N	11989	CO-60	1.4E-08	2.5E-15	2.9E-15
					5.3E-15

ESTIMATED RADIONUCLIDE CONCENTRATIONS
AT VARIOUS LOCATIONS IN THE ENVIRONMENT

Wind Toward	Distance (meters)	Nuclide	Dry	Wet	Ground
			Air Concentration (pCi/m ³)	Deposition Rate (pCi/cm ² /s)	Deposition Rate (pCi/cm ² /s)
N	11989	CS-137	7.1E-07	1.3E-13	2.7E-13
N	11989	BA-137M	7.3E-11	1.3E-17	4.0E-18
N	11989	EU-154	3.8E-09	6.8E-16	7.8E-16
N	11989	NI-63	2.2E-08	3.9E-15	4.5E-15
N	11989	PU-238	9.5E-10	1.7E-16	2.0E-16
N	11989	PU-239	1.2E-09	2.2E-16	2.5E-16
N	11989	PU-240	1.2E-09	2.2E-16	2.5E-16
N	13245	AM-241	2.4E-10	4.3E-17	4.9E-17
N	13245	CO-60	1.2E-08	2.2E-15	2.6E-15
N	13245	CS-137	6.3E-07	1.1E-13	1.3E-13
N	13245	BA-137M	2.9E-11	5.2E-18	1.6E-18
N	13245	EU-154	3.4E-09	6.1E-16	7.1E-16
N	13245	NI-63	1.9E-08	3.5E-15	4.1E-15
N	13245	PU-238	8.4E-10	1.5E-16	1.8E-16
N	13245	PU-239	1.1E-09	1.9E-16	2.3E-16
N	13245	PU-240	1.1E-09	1.9E-16	2.3E-16
N	13286	AM-241	2.4E-10	4.2E-17	4.9E-17
N	13286	CO-60	1.2E-08	2.2E-15	2.6E-15
N	13286	CS-137	6.3E-07	1.1E-13	1.3E-13
N	13286	BA-137M	2.8E-11	5.0E-18	1.6E-18
N	13286	EU-154	3.4E-09	6.1E-16	7.0E-16
N	13286	NI-63	1.9E-08	3.5E-15	4.1E-15
N	13286	PU-238	8.4E-10	1.5E-16	1.8E-16
N	13286	PU-239	1.1E-09	1.9E-16	2.3E-16
N	13286	PU-240	1.1E-09	1.9E-16	2.3E-16
N	13483	AM-241	2.3E-10	4.2E-17	4.9E-17
N	13483	CO-60	1.2E-08	2.2E-15	2.5E-15
N	13483	CS-137	6.2E-07	1.1E-13	1.3E-13
N	13483	BA-137M	2.4E-11	4.4E-18	1.3E-18
N	13483	EU-154	3.3E-09	6.0E-16	6.9E-16
N	13483	NI-63	1.9E-08	3.4E-15	4.0E-15
N	13483	PU-238	8.3E-10	1.5E-16	1.7E-16
N	13483	PU-239	1.1E-09	1.9E-16	2.2E-16
N	13483	PU-240	1.1E-09	1.9E-16	2.2E-16
N	13612	AM-241	2.3E-10	4.1E-17	4.8E-17
N	13612	CO-60	1.2E-08	2.1E-15	2.5E-15
N	13612	CS-137	6.1E-07	1.1E-13	1.3E-13
N	13612	BA-137M	2.2E-11	4.0E-18	1.2E-18
N	13612	EU-154	3.3E-09	5.9E-16	6.9E-16
N	13612	NI-63	1.9E-08	3.4E-15	4.0E-15
N	13612	PU-238	8.2E-10	1.5E-16	1.7E-16
N	13612	PU-239	1.0E-09	1.9E-16	2.2E-16
N	13612	PU-240	1.0E-09	1.9E-16	2.2E-16
N	13664	AM-241	2.3E-10	4.1E-17	4.8E-17
N	13664	CO-60	1.2E-08	2.1E-15	2.5E-15
N	13664	CS-137	6.1E-07	1.1E-13	1.3E-13
N	13664	BA-137M	2.1E-11	3.8E-18	1.2E-18

ESTIMATED RADIONUCLIDE CONCENTRATIONS
AT VARIOUS LOCATIONS IN THE ENVIRONMENT

Wind Toward	Distance (meters)	Nuclide	Dry	Wet	Ground
			Air Concentration (pCi/m ³)	Deposition Rate (pCi/cm ² /s)	Deposition Rate (pCi/cm ² /s)
N	13664	EU-154	3.3E-09	5.9E-16	6.8E-16
N	13664	NI-63	1.9E-08	3.4E-15	4.0E-15
N	13664	PU-238	8.1E-10	1.5E-16	1.7E-16
N	13664	PU-239	1.0E-09	1.9E-16	2.2E-16
N	13664	PU-240	1.0E-09	1.9E-16	2.2E-16
N	13959	AM-241	2.2E-10	4.0E-17	4.7E-17
N	13959	CO-60	1.2E-08	2.1E-15	2.4E-15
N	13959	CS-137	5.9E-07	1.1E-13	1.2E-13
N	13959	BA-137M	1.7E-11	3.1E-18	9.6E-19
N	13959	EU-154	3.2E-09	5.7E-16	6.7E-16
N	13959	NI-63	1.8E-08	3.3E-15	3.9E-15
N	13959	PU-238	7.9E-10	1.4E-16	1.7E-16
N	13959	PU-239	1.0E-09	1.8E-16	2.1E-16
N	13959	PU-240	1.0E-09	1.8E-16	2.1E-16
N	14258	AM-241	2.2E-10	3.9E-17	4.6E-17
N	14258	CO-60	1.1E-08	2.0E-15	2.4E-15
N	14258	CS-137	5.8E-07	1.0E-13	1.2E-13
N	14258	BA-137M	1.4E-11	2.5E-18	7.8E-19
N	14258	EU-154	3.1E-09	5.6E-16	6.6E-16
N	14258	NI-63	1.8E-08	3.2E-15	3.8E-15
N	14258	PU-238	7.7E-10	1.4E-16	1.6E-16
N	14258	PU-239	9.9E-10	1.8E-16	2.1E-16
N	14258	PU-240	9.9E-10	1.8E-16	2.1E-16
N	14374	AM-241	2.1E-10	3.9E-17	4.6E-17
N	14374	CO-60	1.1E-08	2.0E-15	2.4E-15
N	14374	CS-137	5.7E-07	1.0E-13	1.2E-13
N	14374	BA-137M	1.3E-11	2.3E-18	7.2E-19
N	14374	EU-154	3.1E-09	5.5E-16	6.5E-16
N	14374	NI-63	1.8E-08	3.2E-15	3.8E-15
N	14374	PU-238	7.7E-10	1.4E-16	1.6E-16
N	14374	PU-239	9.8E-10	1.8E-16	2.1E-16
N	14374	PU-240	9.8E-10	1.8E-16	2.1E-16
N	15241	AM-241	2.0E-10	3.6E-17	4.3E-17
N	15241	CO-60	1.0E-08	1.9E-15	2.2E-15
N	15241	CS-137	5.3E-07	9.6E-14	1.1E-13
N	15241	BA-137M	6.8E-12	1.2E-18	3.9E-19
N	15241	EU-154	2.9E-09	5.2E-16	6.1E-16
N	15241	NI-63	1.7E-08	3.0E-15	3.5E-15
N	15241	PU-238	7.2E-10	1.3E-16	1.5E-16
N	15241	PU-239	9.2E-10	1.6E-16	2.0E-16
N	15241	PU-240	9.2E-10	1.6E-16	2.0E-16
N	15441	AM-241	2.0E-10	3.6E-17	4.2E-17
N	15441	CO-60	1.0E-08	1.9E-15	2.2E-15
N	15441	CS-137	5.3E-07	9.5E-14	1.1E-13
N	15441	BA-137M	5.9E-12	1.1E-18	3.4E-19
N	15441	EU-154	2.8E-09	5.1E-16	6.0E-16
N	15441	NI-63	1.6E-08	2.9E-15	3.5E-15

ESTIMATED RADIONUCLIDE CONCENTRATIONS
AT VARIOUS LOCATIONS IN THE ENVIRONMENT

Wind Toward	Distance (meters)	Nuclide	Dry	Wet	Ground
			Air Concentration (pCi/m ³)	Deposition Rate (pCi/cm ² /s)	Deposition Rate (pCi/cm ² /s)
N	15441	PU-238	7.0E-10	1.3E-16	2.8E-16
N	15441	PU-239	9.0E-10	1.6E-16	3.6E-16
N	15441	PU-240	9.0E-10	1.6E-16	3.6E-16
N	15784	AM-241	1.9E-10	3.5E-17	7.6E-17
N	15784	CO-60	1.0E-08	1.8E-15	4.0E-15
N	15784	CS-137	5.1E-07	9.2E-14	2.0E-13
N	15784	BA-137M	4.6E-12	8.3E-19	1.1E-18
N	15784	EU-154	2.8E-09	5.0E-16	1.1E-15
N	15784	NI-63	1.6E-08	2.9E-15	6.3E-15
N	15784	PU-238	6.9E-10	1.2E-16	2.7E-16
N	15784	PU-239	8.8E-10	1.6E-16	3.5E-16
N	15784	PU-240	8.8E-10	1.6E-16	3.5E-16
N	15844	AM-241	1.9E-10	3.5E-17	7.6E-17
N	15844	CO-60	1.0E-08	1.8E-15	3.9E-15
N	15844	CS-137	5.1E-07	9.2E-14	2.0E-13
N	15844	BA-137M	4.4E-12	7.9E-19	1.0E-18
N	15844	EU-154	2.7E-09	4.9E-16	1.1E-15
N	15844	NI-63	1.6E-08	2.8E-15	6.2E-15
N	15844	PU-238	6.8E-10	1.2E-16	2.7E-16
N	15844	PU-239	8.8E-10	1.6E-16	3.5E-16
N	15844	PU-240	8.8E-10	1.6E-16	3.5E-16
N	16323	AM-241	1.9E-10	3.3E-17	7.3E-17
N	16323	CO-60	9.6E-09	1.7E-15	3.8E-15
N	16323	CS-137	4.9E-07	8.9E-14	1.9E-13
N	16323	BA-137M	3.1E-12	5.6E-19	7.5E-19
N	16323	EU-154	2.6E-09	4.8E-16	1.0E-15
N	16323	NI-63	1.5E-08	2.7E-15	6.0E-15
N	16323	PU-238	6.6E-10	1.2E-16	2.6E-16
N	16323	PU-239	8.5E-10	1.5E-16	3.3E-16
N	16323	PU-240	8.5E-10	1.5E-16	3.3E-16
N	17329	AM-241	1.7E-10	3.1E-17	6.9E-17
N	17329	CO-60	9.0E-09	1.6E-15	3.6E-15
N	17329	CS-137	4.6E-07	8.3E-14	1.8E-13
N	17329	BA-137M	1.5E-12	2.8E-19	3.7E-19
N	17329	EU-154	2.5E-09	4.4E-16	9.8E-16
N	17329	NI-63	1.4E-08	2.6E-15	5.7E-15
N	17329	PU-238	6.2E-10	1.1E-16	2.4E-16
N	17329	PU-239	7.9E-10	1.4E-16	3.1E-16
N	17329	PU-240	7.9E-10	1.4E-16	3.1E-16
NNW	10344	AM-241	2.5E-10	4.5E-17	1.0E-16
NNW	10344	CO-60	1.3E-08	2.4E-15	5.4E-15
NNW	10344	CS-137	6.7E-07	1.2E-13	2.7E-13
NNW	10344	BA-137M	7.0E-11	1.3E-17	1.8E-17
NNW	10344	EU-154	3.6E-09	6.5E-16	1.5E-15
NNW	10344	NI-63	2.1E-08	3.7E-15	8.5E-15
NNW	10344	PU-238	9.0E-10	1.6E-16	3.7E-16
NNW	10344	PU-239	1.1E-09	2.1E-16	4.7E-16

ESTIMATED RADIONUCLIDE CONCENTRATIONS
AT VARIOUS LOCATIONS IN THE ENVIRONMENT

Wind Toward	Distance (meters)	Nuclide	Dry	Wet	Ground
			Air Concentration (pCi/m ³)	Deposition Rate (pCi/cm ² /s)	Deposition Rate (pCi/cm ² /s)
NNW	10344	PU-240	1.1E-09	2.1E-16	2.6E-16
NNW	10365	AM-241	2.5E-10	4.5E-17	5.8E-17
NNW	10365	CO-60	1.3E-08	2.4E-15	3.0E-15
NNW	10365	CS-137	6.7E-07	1.2E-13	1.5E-13
NNW	10365	BA-137M	6.9E-11	1.2E-17	5.0E-18
NNW	10365	EU-154	3.6E-09	6.5E-16	8.3E-16
NNW	10365	NI-63	2.1E-08	3.7E-15	4.8E-15
NNW	10365	PU-238	9.0E-10	1.6E-16	2.1E-16
NNW	10365	PU-239	1.1E-09	2.1E-16	2.6E-16
NNW	10365	PU-240	1.1E-09	2.1E-16	2.6E-16
NNW	10472	AM-241	2.5E-10	4.5E-17	5.7E-17
NNW	10472	CO-60	1.3E-08	2.3E-15	3.0E-15
NNW	10472	CS-137	6.6E-07	1.2E-13	1.5E-13
NNW	10472	BA-137M	6.4E-11	1.1E-17	4.6E-18
NNW	10472	EU-154	3.5E-09	6.4E-16	8.2E-16
NNW	10472	NI-63	2.0E-08	3.7E-15	4.7E-15
NNW	10472	PU-238	8.9E-10	1.6E-16	2.0E-16
JW	10472	PU-239	1.1E-09	2.0E-16	2.6E-16
NNW	10472	PU-240	1.1E-09	2.0E-16	2.6E-16
NNW	10590	AM-241	2.4E-10	4.4E-17	5.7E-17
NNW	10590	CO-60	1.3E-08	2.3E-15	2.9E-15
NNW	10590	CS-137	6.5E-07	1.2E-13	1.5E-13
NNW	10590	BA-137M	5.8E-11	1.0E-17	4.2E-18
NNW	10590	EU-154	3.5E-09	6.3E-16	8.1E-16
NNW	10590	NI-63	2.0E-08	3.6E-15	4.7E-15
NNW	10590	PU-238	8.7E-10	1.6E-16	2.0E-16
NNW	10590	PU-239	1.1E-09	2.0E-16	2.6E-16
NNW	10590	PU-240	1.1E-09	2.0E-16	2.6E-16
NNW	11103	AM-241	2.3E-10	4.2E-17	5.4E-17
NNW	11103	CO-60	1.2E-08	2.2E-15	2.8E-15
NNW	11103	CS-137	6.2E-07	1.1E-13	1.4E-13
NNW	11103	BA-137M	3.9E-11	7.0E-18	2.8E-18
NNW	11103	EU-154	3.3E-09	6.0E-16	7.7E-16
NNW	11103	NI-63	1.9E-08	3.5E-15	4.4E-15
NNW	11103	PU-238	8.3E-10	1.5E-16	1.9E-16
NNW	11103	PU-239	1.1E-09	1.9E-16	2.5E-16
NNW	11103	PU-240	1.1E-09	1.9E-16	2.5E-16
NNW	11989	AM-241	2.1E-10	3.8E-17	5.0E-17
NNW	11989	CO-60	1.1E-08	2.0E-15	2.6E-15
NNW	11989	CS-137	5.7E-07	1.0E-13	1.3E-13
NNW	11989	BA-137M	2.0E-11	3.6E-18	1.4E-18
NNW	11989	EU-154	3.1E-09	5.5E-16	7.1E-16
NNW	11989	NI-63	1.8E-08	3.2E-15	4.1E-15
JW	11989	PU-238	7.6E-10	1.4E-16	1.8E-16
JW	11989	PU-239	9.8E-10	1.8E-16	2.3E-16
NNW	11989	PU-240	9.8E-10	1.8E-16	2.3E-16
NNW	13245	AM-241	1.9E-10	3.5E-17	4.5E-17
					8.0E-17

ESTIMATED RADIONUCLIDE CONCENTRATIONS
AT VARIOUS LOCATIONS IN THE ENVIRONMENT

Wind Toward	Distance (meters)	Nuclide	Dry	Wet	Ground
			Air Concentration (pCi/m ³)	Deposition Rate (pCi/cm ² /s)	Deposition Rate (pCi/cm ² /s)
NNW	13245	CO-60	1.0E-08	1.8E-15	2.3E-15
NNW	13245	CS-137	5.1E-07	9.2E-14	1.2E-13
NNW	13245	BA-137M	7.8E-12	1.4E-18	5.5E-19
NNW	13245	EU-154	2.7E-09	4.9E-16	6.4E-16
NNW	13245	NI-63	1.6E-08	2.8E-15	3.7E-15
NNW	13245	PU-238	6.8E-10	1.2E-16	1.6E-16
NNW	13245	PU-239	8.8E-10	1.6E-16	2.1E-16
NNW	13245	PU-240	8.8E-10	1.6E-16	2.1E-16
NNW	13286	AM-241	1.9E-10	3.4E-17	4.5E-17
NNW	13286	CO-60	1.0E-08	1.8E-15	2.3E-15
NNW	13286	CS-137	5.1E-07	9.2E-14	1.2E-13
NNW	13286	BA-137M	7.5E-12	1.4E-18	5.4E-19
NNW	13286	EU-154	2.7E-09	4.9E-16	6.4E-16
NNW	13286	NI-63	1.6E-08	2.8E-15	3.7E-15
NNW	13286	PU-238	6.8E-10	1.2E-16	1.6E-16
NNW	13286	PU-239	8.7E-10	1.6E-16	2.0E-16
NNW	13286	PU-240	8.7E-10	1.6E-16	2.0E-16
NNW	13483	AM-241	1.9E-10	3.4E-17	4.4E-17
NNW	13483	CO-60	9.8E-09	1.8E-15	2.3E-15
NNW	13483	CS-137	5.0E-07	9.0E-14	1.2E-13
NNW	13483	BA-137M	6.5E-12	1.2E-18	4.6E-19
NNW	13483	EU-154	2.7E-09	4.8E-16	6.3E-16
NNW	13483	NI-63	1.6E-08	2.8E-15	3.6E-15
NNW	13483	PU-238	6.7E-10	1.2E-16	1.6E-16
NNW	13483	PU-239	8.6E-10	1.5E-16	2.0E-16
NNW	13483	PU-240	8.6E-10	1.5E-16	2.0E-16
NNW	13612	AM-241	1.9E-10	3.4E-17	4.4E-17
NNW	13612	CO-60	9.7E-09	1.7E-15	2.3E-15
NNW	13612	CS-137	5.0E-07	8.9E-14	1.2E-13
NNW	13612	BA-137M	5.9E-12	1.1E-18	4.2E-19
NNW	13612	EU-154	2.7E-09	4.8E-16	6.3E-16
NNW	13612	NI-63	1.5E-08	2.8E-15	3.6E-15
NNW	13612	PU-238	6.6E-10	1.2E-16	1.6E-16
NNW	13612	PU-239	8.5E-10	1.5E-16	2.0E-16
NNW	13612	PU-240	8.5E-10	1.5E-16	2.0E-16
NNW	13664	AM-241	1.9E-10	3.3E-17	4.4E-17
NNW	13664	CO-60	9.7E-09	1.7E-15	2.3E-15
NNW	13664	CS-137	4.9E-07	8.9E-14	1.2E-13
NNW	13664	BA-137M	5.7E-12	1.0E-18	4.0E-19
NNW	13664	EU-154	2.6E-09	4.8E-16	6.2E-16
NNW	13664	NI-63	1.5E-08	2.8E-15	3.6E-15
NNW	13664	PU-238	6.6E-10	1.2E-16	1.6E-16
NNW	13664	PU-239	8.5E-10	1.5E-16	2.0E-16
NNW	13664	PU-240	8.5E-10	1.5E-16	2.0E-16
NNW	13959	AM-241	1.8E-10	3.3E-17	4.3E-17
NNW	13959	CO-60	9.4E-09	1.7E-15	2.2E-15
NNW	13959	CS-137	4.8E-07	8.7E-14	1.1E-13

ESTIMATED RADIONUCLIDE CONCENTRATIONS
AT VARIOUS LOCATIONS IN THE ENVIRONMENT

Wind Toward	Distance (meters)	Nuclide	Dry	Wet	Ground
			Air Concentration (pCi/m ³)	Deposition Rate (pCi/cm ² /s)	Deposition Rate (pCi/cm ² /s)
NNW	13959	BA-137M	4.6E-12	8.2E-19	3.3E-19
NNW	13959	EU-154	2.6E-09	4.7E-16	6.1E-16
NNW	13959	NI-63	1.5E-08	2.7E-15	3.5E-15
NNW	13959	PU-238	6.5E-10	1.2E-16	1.5E-16
NNW	13959	PU-239	8.3E-10	1.5E-16	1.9E-16
NNW	13959	PU-240	8.3E-10	1.5E-16	1.9E-16
NNW	14258	AM-241	1.8E-10	3.2E-17	4.2E-17
NNW	14258	CO-60	9.2E-09	1.7E-15	2.2E-15
NNW	14258	CS-137	4.7E-07	8.5E-14	1.1E-13
NNW	14258	BA-137M	3.7E-12	6.6E-19	2.6E-19
NNW	14258	EU-154	2.5E-09	4.6E-16	6.0E-16
NNW	14258	NI-63	1.5E-08	2.6E-15	3.4E-15
NNW	14258	PU-238	6.3E-10	1.1E-16	1.5E-16
NNW	14258	PU-239	8.1E-10	1.5E-16	1.9E-16
NNW	14258	PU-240	8.1E-10	1.5E-16	1.9E-16
NNW	14374	AM-241	1.8E-10	3.2E-17	4.1E-17
NNW	14374	CO-60	9.1E-09	1.6E-15	2.2E-15
JW	14374	CS-137	4.7E-07	8.4E-14	1.1E-13
NW	14374	BA-137M	3.4E-12	6.1E-19	2.4E-19
NNW	14374	EU-154	2.5E-09	4.5E-16	5.9E-16
NNW	14374	NI-63	1.4E-08	2.6E-15	3.4E-15
NNW	14374	PU-238	6.3E-10	1.1E-16	1.5E-16
NNW	14374	PU-239	8.0E-10	1.4E-16	1.9E-16
NNW	14374	PU-240	8.0E-10	1.4E-16	1.9E-16
NNW	15241	AM-241	1.6E-10	3.0E-17	3.9E-17
NNW	15241	CO-60	8.6E-09	1.5E-15	2.0E-15
NNW	15241	CS-137	4.4E-07	7.9E-14	1.0E-13
NNW	15241	BA-137M	1.8E-12	3.2E-19	1.3E-19
NNW	15241	EU-154	2.4E-09	4.2E-16	5.6E-16
NNW	15241	NI-63	1.4E-08	2.4E-15	3.2E-15
NNW	15241	PU-238	5.9E-10	1.1E-16	1.4E-16
NNW	15241	PU-239	7.5E-10	1.4E-16	1.8E-16
NNW	15241	PU-240	7.5E-10	1.4E-16	1.8E-16
NNW	15441	AM-241	1.6E-10	2.9E-17	3.8E-17
NNW	15441	CO-60	8.4E-09	1.5E-15	2.0E-15
NNW	15441	CS-137	4.3E-07	7.8E-14	1.0E-13
NNW	15441	BA-137M	1.5E-12	2.8E-19	1.1E-19
NNW	15441	EU-154	2.3E-09	4.2E-16	5.5E-16
NNW	15441	NI-63	1.3E-08	2.4E-15	3.2E-15
NNW	15441	PU-238	5.8E-10	1.0E-16	1.4E-16
NNW	15441	PU-239	7.4E-10	1.3E-16	1.8E-16
NNW	15441	PU-240	7.4E-10	1.3E-16	1.8E-16
NNW	15784	AM-241	1.6E-10	2.9E-17	3.8E-17
NW	15784	CO-60	8.2E-09	1.5E-15	2.0E-15
NW	15784	CS-137	4.2E-07	7.6E-14	1.0E-13
NNW	15784	BA-137M	1.2E-12	2.2E-19	8.6E-20
NNW	15784	EU-154	2.3E-09	4.1E-16	5.4E-16

ESTIMATED RADIONUCLIDE CONCENTRATIONS
AT VARIOUS LOCATIONS IN THE ENVIRONMENT

Wind Toward	Distance (meters)	Nuclide	Dry	Wet	Ground
			Air Concentration (pCi/m ³)	Deposition Rate (pCi/cm ² /s)	Deposition Rate (pCi/cm ² /s)
NNW	15784	NI-63	1.3E-08	2.4E-15	3.1E-15
NNW	15784	PU-238	5.7E-10	1.0E-16	1.3E-16
NNW	15784	PU-239	7.2E-10	1.3E-16	1.7E-16
NNW	15784	PU-240	7.2E-10	1.3E-16	1.7E-16
NNW	15844	AM-241	1.6E-10	2.8E-17	3.7E-17
NNW	15844	CO-60	8.2E-09	1.5E-15	1.9E-15
NNW	15844	CS-137	4.2E-07	7.6E-14	1.0E-13
NNW	15844	BA-137M	1.2E-12	2.1E-19	8.2E-20
NNW	15844	EU-154	2.3E-09	4.1E-16	5.3E-16
NNW	15844	NI-63	1.3E-08	2.3E-15	3.1E-15
NNW	15844	PU-238	5.6E-10	1.0E-16	1.3E-16
NNW	15844	PU-239	7.2E-10	1.3E-16	1.7E-16
NNW	15844	PU-240	7.2E-10	1.3E-16	1.7E-16
NNW	16323	AM-241	1.5E-10	2.7E-17	3.6E-17
NNW	16323	CO-60	8.0E-09	1.4E-15	1.9E-15
NNW	16323	CS-137	4.1E-07	7.3E-14	9.7E-14
NNW	16323	BA-137M	8.2E-13	1.5E-19	5.8E-20
NNW	16323	EU-154	2.2E-09	3.9E-16	5.2E-16
NNW	16323	NI-63	1.3E-08	2.3E-15	3.0E-15
NNW	16323	PU-238	5.4E-10	9.8E-17	1.3E-16
NNW	16323	PU-239	7.0E-10	1.3E-16	1.7E-16
NNW	16323	PU-240	7.0E-10	1.3E-16	1.7E-16
NNW	17329	AM-241	1.4E-10	2.6E-17	3.4E-17
NNW	17329	CO-60	7.4E-09	1.3E-15	1.8E-15
NNW	17329	CS-137	3.8E-07	6.8E-14	9.1E-14
NNW	17329	BA-137M	4.0E-13	7.2E-20	2.8E-20
NNW	17329	EU-154	2.0E-09	3.7E-16	4.9E-16
NNW	17329	NI-63	1.2E-08	2.1E-15	2.8E-15
NNW	17329	PU-238	5.1E-10	9.2E-17	1.2E-16
NNW	17329	PU-239	6.5E-10	1.2E-16	1.6E-16
NNW	17329	PU-240	6.5E-10	1.2E-16	1.6E-16
NW	10344	AM-241	2.7E-10	4.9E-17	6.1E-17
NW	10344	CO-60	1.4E-08	2.6E-15	3.2E-15
NW	10344	CS-137	7.3E-07	1.3E-13	1.6E-13
NW	10344	BA-137M	3.7E-11	6.7E-18	3.9E-18
NW	10344	EU-154	3.9E-09	7.0E-16	8.8E-16
NW	10344	NI-63	2.3E-08	4.1E-15	5.1E-15
NW	10344	PU-238	9.8E-10	1.8E-16	2.2E-16
NW	10344	PU-239	1.3E-09	2.3E-16	2.8E-16
NW	10344	PU-240	1.3E-09	2.3E-16	2.8E-16
NW	10365	AM-241	2.7E-10	4.9E-17	6.1E-17
NW	10365	CO-60	1.4E-08	2.6E-15	3.2E-15
NW	10365	CS-137	7.3E-07	1.3E-13	1.6E-13
NW	10365	BA-137M	3.6E-11	6.5E-18	3.8E-18
NW	10365	EU-154	3.9E-09	7.0E-16	8.7E-16
NW	10365	NI-63	2.3E-08	4.1E-15	5.0E-15
NW	10365	PU-238	9.7E-10	1.8E-16	2.2E-16

ESTIMATED RADIONUCLIDE CONCENTRATIONS
AT VARIOUS LOCATIONS IN THE ENVIRONMENT

Wind Toward	Distance (meters)	Nuclide	Dry	Wet	Ground
			Air Concentration (pCi/m ³)	Deposition Rate (pCi/cm ² /s)	Deposition Rate (pCi/cm ² /s)
NW	10365	PU-239	1.2E-09	2.2E-16	2.8E-16
NW	10365	PU-240	1.2E-09	2.2E-16	2.8E-16
NW	10472	AM-241	2.7E-10	4.9E-17	6.1E-17
NW	10472	CO-60	1.4E-08	2.5E-15	3.2E-15
NW	10472	CS-137	7.2E-07	1.3E-13	1.6E-13
NW	10472	BA-137M	3.3E-11	5.9E-18	3.5E-18
NW	10472	EU-154	3.9E-09	6.9E-16	8.7E-16
NW	10472	NI-63	2.2E-08	4.0E-15	5.0E-15
NW	10472	PU-238	9.6E-10	1.7E-16	2.2E-16
NW	10472	PU-239	1.2E-09	2.2E-16	2.8E-16
NW	10472	PU-240	1.2E-09	2.2E-16	2.8E-16
NW	10590	AM-241	2.7E-10	4.8E-17	6.0E-17
NW	10590	CO-60	1.4E-08	2.5E-15	3.1E-15
NW	10590	CS-137	7.1E-07	1.3E-13	1.6E-13
NW	10590	BA-137M	3.0E-11	5.4E-18	3.2E-18
NW	10590	EU-154	3.8E-09	6.9E-16	8.6E-16
NW	10590	NI-63	2.2E-08	4.0E-15	4.9E-15
NW	10590	PU-238	9.5E-10	1.7E-16	2.1E-16
NW	10590	PU-239	1.2E-09	2.2E-16	2.7E-16
NW	10590	PU-240	1.2E-09	2.2E-16	2.7E-16
NW	11103	AM-241	2.5E-10	4.6E-17	5.7E-17
NW	11103	CO-60	1.3E-08	2.4E-15	3.0E-15
NW	11103	CS-137	6.7E-07	1.2E-13	1.5E-13
NW	11103	BA-137M	1.9E-11	3.4E-18	2.0E-18
NW	11103	EU-154	3.6E-09	6.5E-16	8.2E-16
NW	11103	NI-63	2.1E-08	3.8E-15	4.7E-15
NW	11103	PU-238	9.0E-10	1.6E-16	2.0E-16
NW	11103	PU-239	1.2E-09	2.1E-16	2.6E-16
NW	11103	PU-240	1.2E-09	2.1E-16	2.6E-16
NW	11989	AM-241	2.3E-10	4.2E-17	5.3E-17
NW	11989	CO-60	1.2E-08	2.2E-15	2.7E-15
NW	11989	CS-137	6.2E-07	1.1E-13	1.4E-13
NW	11989	BA-137M	8.7E-12	1.6E-18	9.7E-19
NW	11989	EU-154	3.3E-09	6.0E-16	7.5E-16
NW	11989	NI-63	1.9E-08	3.4E-15	4.4E-15
NW	11989	PU-238	8.3E-10	1.5E-16	1.9E-16
NW	11989	PU-239	1.1E-09	1.9E-16	2.4E-16
NW	11989	PU-240	1.1E-09	1.9E-16	2.4E-16
NW	13245	AM-241	2.1E-10	3.7E-17	4.8E-17
NW	13245	CO-60	1.1E-08	1.9E-15	2.5E-15
NW	13245	CS-137	5.5E-07	1.0E-13	1.3E-13
NW	13245	BA-137M	2.9E-12	5.3E-19	3.4E-19
NW	13245	EU-154	3.0E-09	5.3E-16	6.8E-16
NW	13245	NI-63	1.7E-08	3.1E-15	3.9E-15
NW	13245	PU-238	7.4E-10	1.3E-16	1.7E-16
NW	13245	PU-239	9.5E-10	1.7E-16	2.2E-16
NW	13245	PU-240	9.5E-10	1.7E-16	2.2E-16

ESTIMATED RADIONUCLIDE CONCENTRATIONS
AT VARIOUS LOCATIONS IN THE ENVIRONMENT

Wind Toward	Distance (meters)	Nuclide	Dry	Wet	Ground
			Air Concentration (pCi/m ³)	Deposition Rate (pCi/cm ² /s)	Deposition Rate (pCi/cm ² /s)
NW	13286	AM-241	2.1E-10	3.7E-17	4.7E-17
NW	13286	CO-60	1.1E-08	1.9E-15	2.5E-15
NW	13286	CS-137	5.5E-07	9.9E-14	1.3E-13
NW	13286	BA-137M	2.8E-12	5.1E-19	3.3E-19
NW	13286	EU-154	3.0E-09	5.3E-16	6.8E-16
NW	13286	NI-63	1.7E-08	3.1E-15	3.9E-15
NW	13286	PU-238	7.4E-10	1.3E-16	1.7E-16
NW	13286	PU-239	9.5E-10	1.7E-16	2.2E-16
NW	13286	PU-240	9.5E-10	1.7E-16	2.2E-16
NW	13483	AM-241	2.0E-10	3.7E-17	4.7E-17
NW	13483	CO-60	1.1E-08	1.9E-15	2.4E-15
NW	13483	CS-137	5.4E-07	9.8E-14	1.2E-13
NW	13483	BA-137M	2.4E-12	4.3E-19	2.8E-19
NW	13483	EU-154	2.9E-09	5.2E-16	6.7E-16
NW	13483	NI-63	1.7E-08	3.0E-15	3.9E-15
NW	13483	PU-238	7.3E-10	1.3E-16	1.7E-16
NW	13483	PU-239	9.3E-10	1.7E-16	2.1E-16
NW	13483	PU-240	9.3E-10	1.7E-16	2.1E-16
NW	13612	AM-241	2.0E-10	3.6E-17	4.6E-17
NW	13612	CO-60	1.1E-08	1.9E-15	2.4E-15
NW	13612	CS-137	5.4E-07	9.7E-14	1.2E-13
NW	13612	BA-137M	2.1E-12	3.9E-19	2.5E-19
NW	13612	EU-154	2.9E-09	5.2E-16	6.6E-16
NW	13612	NI-63	1.7E-08	3.0E-15	3.8E-15
NW	13612	PU-238	7.2E-10	1.3E-16	1.7E-16
NW	13612	PU-239	9.2E-10	1.7E-16	2.1E-16
NW	13612	PU-240	9.2E-10	1.7E-16	2.1E-16
NW	13664	AM-241	2.0E-10	3.6E-17	4.6E-17
NW	13664	CO-60	1.0E-08	1.9E-15	2.4E-15
NW	13664	CS-137	5.3E-07	9.6E-14	1.2E-13
NW	13664	BA-137M	2.1E-12	3.7E-19	2.4E-19
NW	13664	EU-154	2.9E-09	5.2E-16	6.6E-16
NW	13664	NI-63	1.7E-08	3.0E-15	3.8E-15
NW	13664	PU-238	7.2E-10	1.3E-16	1.6E-16
NW	13664	PU-239	9.2E-10	1.7E-16	2.1E-16
NW	13664	PU-240	9.2E-10	1.7E-16	2.1E-16
NW	13959	AM-241	2.0E-10	3.5E-17	4.5E-17
NW	13959	CO-60	1.0E-08	1.8E-15	2.4E-15
NW	13959	CS-137	5.2E-07	9.4E-14	1.2E-13
NW	13959	BA-137M	1.6E-12	2.9E-19	1.9E-19
NW	13959	EU-154	2.8E-09	5.0E-16	6.4E-16
NW	13959	NI-63	1.6E-08	2.9E-15	3.7E-15
NW	13959	PU-238	7.0E-10	1.3E-16	1.6E-16
NW	13959	PU-239	9.0E-10	1.6E-16	2.1E-16
NW	13959	PU-240	9.0E-10	1.6E-16	2.1E-16
NW	14258	AM-241	1.9E-10	3.4E-17	4.4E-17
NW	14258	CO-60	1.0E-08	1.8E-15	2.3E-15

ESTIMATED RADIONUCLIDE CONCENTRATIONS
AT VARIOUS LOCATIONS IN THE ENVIRONMENT

Wind Toward	Distance (meters)	Nuclide	Dry	Wet	Ground
			Air Concentration (pCi/m ³)	Deposition Rate (pCi/cm ² /s)	Deposition Rate (pCi/cm ² /s)
NW	14258	CS-137	5.1E-07	9.2E-14	1.2E-13
NW	14258	BA-137M	1.2E-12	2.2E-19	1.5E-19
NW	14258	EU-154	2.7E-09	4.9E-16	6.3E-16
NW	14258	NI-63	1.6E-08	2.8E-15	3.6E-15
NW	14258	PU-238	6.8E-10	1.2E-16	1.6E-16
NW	14258	PU-239	8.8E-10	1.6E-16	2.0E-16
NW	14258	PU-240	8.8E-10	1.6E-16	2.0E-16
NW	14374	AM-241	1.9E-10	3.4E-17	4.4E-17
NW	14374	CO-60	9.9E-09	1.8E-15	2.3E-15
NW	14374	CS-137	5.1E-07	9.1E-14	1.2E-13
NW	14374	BA-137M	1.1E-12	2.0E-19	1.3E-19
NW	14374	EU-154	2.7E-09	4.9E-16	6.3E-16
NW	14374	NI-63	1.6E-08	2.8E-15	3.6E-15
NW	14374	PU-238	6.8E-10	1.2E-16	1.6E-16
NW	14374	PU-239	8.7E-10	1.6E-16	2.0E-16
NW	14374	PU-240	8.7E-10	1.6E-16	2.0E-16
NW	15241	AM-241	1.8E-10	3.2E-17	4.1E-17
NW	15241	CO-60	9.3E-09	1.7E-15	2.1E-15
NW	15241	CS-137	4.7E-07	8.5E-14	1.1E-13
NW	15241	BA-137M	5.4E-13	9.7E-20	6.5E-20
NW	15241	EU-154	2.5E-09	4.6E-16	5.9E-16
NW	15241	NI-63	1.5E-08	2.6E-15	3.4E-15
NW	15241	PU-238	6.4E-10	1.1E-16	1.5E-16
NW	15241	PU-239	8.1E-10	1.5E-16	1.9E-16
NW	15241	PU-240	8.1E-10	1.5E-16	1.9E-16
NW	15441	AM-241	1.8E-10	3.2E-17	4.1E-17
NW	15441	CO-60	9.1E-09	1.6E-15	2.1E-15
NW	15441	CS-137	4.7E-07	8.4E-14	1.1E-13
NW	15441	BA-137M	4.5E-13	8.2E-20	5.5E-20
NW	15441	EU-154	2.5E-09	4.5E-16	5.8E-16
NW	15441	NI-63	1.4E-08	2.6E-15	3.4E-15
NW	15441	PU-238	6.3E-10	1.1E-16	1.5E-16
NW	15441	PU-239	8.0E-10	1.4E-16	1.9E-16
NW	15441	PU-240	8.0E-10	1.4E-16	1.9E-16
NW	15784	AM-241	1.7E-10	3.1E-17	4.0E-17
NW	15784	CO-60	8.9E-09	1.6E-15	2.1E-15
NW	15784	CS-137	4.6E-07	8.2E-14	1.1E-13
NW	15784	BA-137M	3.4E-13	6.1E-20	4.2E-20
NW	15784	EU-154	2.4E-09	4.4E-16	5.7E-16
NW	15784	NI-63	1.4E-08	2.5E-15	3.3E-15
NW	15784	PU-238	6.1E-10	1.1E-16	1.4E-16
NW	15784	PU-239	7.8E-10	1.4E-16	1.8E-16
NW	15784	PU-240	7.8E-10	1.4E-16	1.8E-16
NW	15844	AM-241	1.7E-10	3.1E-17	4.0E-17
JW	15844	CO-60	8.9E-09	1.6E-15	2.1E-15
NW	15844	CS-137	4.5E-07	8.2E-14	1.1E-13
NW	15844	BA-137M	3.2E-13	5.8E-20	4.0E-20

ESTIMATED RADIONUCLIDE CONCENTRATIONS
AT VARIOUS LOCATIONS IN THE ENVIRONMENT

Wind Toward	Distance (meters)	Nuclide	Dry	Wet	Ground
			Air Concentration (pCi/m ³)	Deposition Rate (pCi/cm ² /s)	Deposition Rate (pCi/cm ² /s)
NW	15844	EU-154	2.4E-09	4.4E-16	5.7E-16
NW	15844	NI-63	1.4E-08	2.5E-15	3.3E-15
NW	15844	PU-238	6.1E-10	1.1E-16	1.4E-16
NW	15844	PU-239	7.8E-10	1.4E-16	1.8E-16
NW	15844	PU-240	7.8E-10	1.4E-16	1.8E-16
NW	16323	AM-241	1.6E-10	3.0E-17	3.8E-17
NW	16323	CO-60	8.6E-09	1.5E-15	2.0E-15
NW	16323	CS-137	4.4E-07	7.9E-14	1.0E-13
NW	16323	BA-137M	2.2E-13	3.9E-20	2.7E-20
NW	16323	EU-154	2.4E-09	4.2E-16	5.5E-16
NW	16323	NI-63	1.4E-08	2.4E-15	3.2E-15
NW	16323	PU-238	5.9E-10	1.1E-16	1.4E-16
NW	16323	PU-239	7.5E-10	1.4E-16	1.8E-16
NW	16323	PU-240	7.5E-10	1.4E-16	1.8E-16
NW	17329	AM-241	1.5E-10	2.8E-17	3.6E-17
NW	17329	CO-60	8.0E-09	1.4E-15	1.9E-15
NW	17329	CS-137	4.1E-07	7.4E-14	9.6E-14
NW	17329	BA-137M	9.4E-14	1.7E-20	1.2E-20
NW	17329	EU-154	2.2E-09	4.0E-16	5.2E-16
NW	17329	NI-63	1.3E-08	2.3E-15	3.0E-15
NW	17329	PU-238	5.5E-10	9.9E-17	1.3E-16
NW	17329	PU-239	7.1E-10	1.3E-16	1.7E-16
NW	17329	PU-240	7.1E-10	1.3E-16	1.7E-16
WNW	10344	AM-241	2.8E-10	5.1E-17	6.6E-17
WNW	10344	CO-60	1.5E-08	2.6E-15	3.4E-15
WNW	10344	CS-137	7.5E-07	1.3E-13	1.8E-13
WNW	10344	BA-137M	1.7E-11	3.0E-18	3.7E-18
WNW	10344	EU-154	4.0E-09	7.2E-16	9.4E-16
WNW	10344	NI-63	2.3E-08	4.2E-15	5.4E-15
WNW	10344	PU-238	1.0E-09	1.8E-16	2.4E-16
WNW	10344	PU-239	1.3E-09	2.3E-16	3.0E-16
WNW	10344	PU-240	1.3E-09	2.3E-16	3.0E-16
WNW	10365	AM-241	2.8E-10	5.1E-17	6.6E-17
WNW	10365	CO-60	1.5E-08	2.6E-15	3.4E-15
WNW	10365	CS-137	7.5E-07	1.3E-13	1.7E-13
WNW	10365	BA-137M	1.6E-11	3.0E-18	3.6E-18
WNW	10365	EU-154	4.0E-09	7.2E-16	9.4E-16
WNW	10365	NI-63	2.3E-08	4.2E-15	5.4E-15
WNW	10365	PU-238	1.0E-09	1.8E-16	2.3E-16
WNW	10365	PU-239	1.3E-09	2.3E-16	3.0E-16
WNW	10365	PU-240	1.3E-09	2.3E-16	3.0E-16
WNW	10472	AM-241	2.8E-10	5.0E-17	6.5E-17
WNW	10472	CO-60	1.4E-08	2.6E-15	3.4E-15
WNW	10472	CS-137	7.4E-07	1.3E-13	1.7E-13
WNW	10472	BA-137M	1.5E-11	2.7E-18	3.3E-18
WNW	10472	EU-154	4.0E-09	7.1E-16	9.3E-16
WNW	10472	NI-63	2.3E-08	4.1E-15	5.4E-15

ESTIMATED RADIONUCLIDE CONCENTRATIONS
AT VARIOUS LOCATIONS IN THE ENVIRONMENT

Wind Toward	Distance (meters)	Nuclide	Dry	Wet	Ground
			Air Concentration (pCi/m ³)	Deposition Rate (pCi/cm ² /s)	Deposition Rate (pCi/cm ² /s)
WNW	10472	PU-238	9.9E-10	1.8E-16	2.3E-16
WNW	10472	PU-239	1.3E-09	2.3E-16	3.0E-16
WNW	10472	PU-240	1.3E-09	2.3E-16	3.0E-16
WNW	10590	AM-241	2.7E-10	4.9E-17	6.4E-17
WNW	10590	CO-60	1.4E-08	2.6E-15	3.4E-15
WNW	10590	CS-137	7.3E-07	1.3E-13	1.7E-13
WNW	10590	BA-137M	1.3E-11	2.4E-18	3.0E-18
WNW	10590	EU-154	3.9E-09	7.1E-16	9.2E-16
WNW	10590	NI-63	2.3E-08	4.1E-15	5.3E-15
WNW	10590	PU-238	9.8E-10	1.8E-16	2.3E-16
WNW	10590	PU-239	1.3E-09	2.3E-16	2.9E-16
WNW	10590	PU-240	1.3E-09	2.3E-16	2.9E-16
WNW	11103	AM-241	2.6E-10	4.7E-17	6.1E-17
WNW	11103	CO-60	1.4E-08	2.4E-15	3.2E-15
WNW	11103	CS-137	6.9E-07	1.2E-13	1.6E-13
WNW	11103	BA-137M	8.6E-12	1.6E-18	1.9E-18
WNW	11103	EU-154	3.7E-09	6.7E-16	8.8E-16
NW	11103	NI-63	2.2E-08	3.9E-15	5.1E-15
NW	11103	PU-238	9.3E-10	1.7E-16	2.2E-16
WNW	11103	PU-239	1.2E-09	2.1E-16	2.8E-16
WNW	11103	PU-240	1.2E-09	2.1E-16	2.8E-16
WNW	11989	AM-241	2.4E-10	4.3E-17	5.7E-17
WNW	11989	CO-60	1.2E-08	2.2E-15	3.0E-15
WNW	11989	CS-137	6.4E-07	1.1E-13	1.5E-13
WNW	11989	BA-137M	4.0E-12	7.2E-19	9.0E-19
WNW	11989	EU-154	3.4E-09	6.2E-16	8.1E-16
WNW	11989	NI-63	2.0E-08	3.6E-15	4.7E-15
WNW	11989	PU-238	8.6E-10	1.5E-16	2.0E-16
WNW	11989	PU-239	1.1E-09	2.0E-16	2.6E-16
WNW	11989	PU-240	1.1E-09	2.0E-16	2.6E-16
WNW	13245	AM-241	2.2E-10	3.9E-17	5.1E-17
WNW	13245	CO-60	1.1E-08	2.0E-15	2.7E-15
WNW	13245	CS-137	5.7E-07	1.0E-13	1.4E-13
WNW	13245	BA-137M	1.4E-12	2.5E-19	3.1E-19
WNW	13245	EU-154	3.1E-09	5.5E-16	7.3E-16
WNW	13245	NI-63	1.8E-08	3.2E-15	4.2E-15
WNW	13245	PU-238	7.7E-10	1.4E-16	1.8E-16
WNW	13245	PU-239	9.8E-10	1.8E-16	2.3E-16
WNW	13245	PU-240	9.8E-10	1.8E-16	2.3E-16
WNW	13286	AM-241	2.1E-10	3.9E-17	5.1E-17
WNW	13286	CO-60	1.1E-08	2.0E-15	2.7E-15
WNW	13286	CS-137	5.7E-07	1.0E-13	1.4E-13
WNW	13286	BA-137M	1.3E-12	2.4E-19	3.0E-19
WNW	13286	EU-154	3.1E-09	5.5E-16	7.3E-16
JW	13286	NI-63	1.8E-08	3.2E-15	4.2E-15
WNW	13286	PU-238	7.7E-10	1.4E-16	1.8E-16
WNW	13286	PU-239	9.8E-10	1.8E-16	2.3E-16

ESTIMATED RADIONUCLIDE CONCENTRATIONS
AT VARIOUS LOCATIONS IN THE ENVIRONMENT

Wind Toward	Distance (meters)	Nuclide	Dry	Wet	Ground
			Air Concentration (pCi/m ³)	Deposition Rate (pCi/cm ² /s)	Deposition Rate (pCi/cm ² /s)
WNW	13286	PU-240	9.8E-10	1.8E-16	2.3E-16
WNW	13483	AM-241	2.1E-10	3.8E-17	5.0E-17
WNW	13483	CO-60	1.1E-08	2.0E-15	2.6E-15
WNW	13483	CS-137	5.6E-07	1.0E-13	1.3E-13
WNW	13483	BA-137M	1.1E-12	2.0E-19	2.6E-19
WNW	13483	EU-154	3.0E-09	5.4E-16	7.2E-16
WNW	13483	NI-63	1.7E-08	3.1E-15	4.1E-15
WNW	13483	PU-238	7.5E-10	1.4E-16	1.8E-16
WNW	13483	PU-239	9.6E-10	1.7E-16	2.3E-16
WNW	13483	PU-240	9.6E-10	1.7E-16	2.3E-16
WNW	13612	AM-241	2.1E-10	3.8E-17	5.0E-17
WNW	13612	CO-60	1.1E-08	2.0E-15	2.6E-15
WNW	13612	CS-137	5.6E-07	1.0E-13	1.3E-13
WNW	13612	BA-137M	1.0E-12	1.8E-19	2.3E-19
WNW	13612	EU-154	3.0E-09	5.4E-16	7.1E-16
WNW	13612	NI-63	1.7E-08	3.1E-15	4.1E-15
WNW	13612	PU-238	7.5E-10	1.3E-16	1.8E-16
WNW	13612	PU-239	9.5E-10	1.7E-16	2.3E-16
WNW	13612	PU-240	9.5E-10	1.7E-16	2.3E-16
WNW	13664	AM-241	2.1E-10	3.7E-17	5.0E-17
WNW	13664	CO-60	1.1E-08	2.0E-15	2.6E-15
WNW	13664	CS-137	5.5E-07	1.0E-13	1.3E-13
WNW	13664	BA-137M	9.7E-13	1.7E-19	2.2E-19
WNW	13664	EU-154	3.0E-09	5.4E-16	7.1E-16
WNW	13664	NI-63	1.7E-08	3.1E-15	4.1E-15
WNW	13664	PU-238	7.4E-10	1.3E-16	1.8E-16
WNW	13664	PU-239	9.5E-10	1.7E-16	2.3E-16
WNW	13664	PU-240	9.5E-10	1.7E-16	2.3E-16
WNW	13959	AM-241	2.0E-10	3.7E-17	4.8E-17
WNW	13959	CO-60	1.1E-08	1.9E-15	2.5E-15
WNW	13959	CS-137	5.4E-07	9.7E-14	1.3E-13
WNW	13959	BA-137M	7.6E-13	1.4E-19	1.7E-19
WNW	13959	EU-154	2.9E-09	5.2E-16	6.9E-16
WNW	13959	NI-63	1.7E-08	3.0E-15	4.0E-15
WNW	13959	PU-238	7.3E-10	1.3E-16	1.7E-16
WNW	13959	PU-239	9.3E-10	1.7E-16	2.2E-16
WNW	13959	PU-240	9.3E-10	1.7E-16	2.2E-16
WNW	14258	AM-241	2.0E-10	3.6E-17	4.7E-17
WNW	14258	CO-60	1.0E-08	1.9E-15	2.5E-15
WNW	14258	CS-137	5.3E-07	9.5E-14	1.3E-13
WNW	14258	BA-137M	5.9E-13	1.1E-19	1.4E-19
WNW	14258	EU-154	2.8E-09	5.1E-16	6.8E-16
WNW	14258	NI-63	1.6E-08	2.9E-15	3.9E-15
WNW	14258	PU-238	7.1E-10	1.3E-16	1.7E-16
WNW	14258	PU-239	9.1E-10	1.6E-16	2.2E-16
WNW	14258	PU-240	9.1E-10	1.6E-16	2.2E-16
WNW	14374	AM-241	2.0E-10	3.5E-17	4.7E-17

ESTIMATED RADIONUCLIDE CONCENTRATIONS
AT VARIOUS LOCATIONS IN THE ENVIRONMENT

Wind Toward	Distance (meters)	Nuclide	Dry	Wet	Ground
			Air Concentration (pCi/m ³)	Deposition Rate (pCi/cm ² /s)	Deposition Rate (pCi/cm ² /s)
WNW	14374	CO-60	1.0E-08	1.8E-15	2.5E-15
WNW	14374	CS-137	5.2E-07	9.4E-14	1.3E-13
WNW	14374	BA-137M	5.4E-13	9.6E-20	1.2E-19
WNW	14374	EU-154	2.8E-09	5.1E-16	6.7E-16
WNW	14374	NI-63	1.6E-08	2.9E-15	3.9E-15
WNW	14374	PU-238	7.0E-10	1.3E-16	1.7E-16
WNW	14374	PU-239	9.0E-10	1.6E-16	2.2E-16
WNW	14374	PU-240	9.0E-10	1.6E-16	2.2E-16
WNW	15241	AM-241	1.8E-10	3.3E-17	4.4E-17
WNW	15241	CO-60	9.6E-09	1.7E-15	2.3E-15
WNW	15241	CS-137	4.9E-07	8.8E-14	1.2E-13
WNW	15241	BA-137M	2.6E-13	4.7E-20	6.0E-20
WNW	15241	EU-154	2.6E-09	4.8E-16	6.3E-16
WNW	15241	NI-63	1.5E-08	2.7E-15	3.7E-15
WNW	15241	PU-238	6.6E-10	1.2E-16	1.6E-16
WNW	15241	PU-239	8.4E-10	1.5E-16	2.0E-16
WNW	15241	PU-240	8.4E-10	1.5E-16	2.0E-16
IW	15441	AM-241	1.8E-10	3.3E-17	4.4E-17
NW	15441	CO-60	9.5E-09	1.7E-15	2.3E-15
WNW	15441	CS-137	4.8E-07	8.7E-14	1.2E-13
WNW	15441	BA-137M	2.2E-13	4.0E-20	5.1E-20
WNW	15441	EU-154	2.6E-09	4.7E-16	6.2E-16
WNW	15441	NI-63	1.5E-08	2.7E-15	3.6E-15
WNW	15441	PU-238	6.5E-10	1.2E-16	1.6E-16
WNW	15441	PU-239	8.3E-10	1.5E-16	2.0E-16
WNW	15441	PU-240	8.3E-10	1.5E-16	2.0E-16
WNW	15784	AM-241	1.8E-10	3.2E-17	4.3E-17
WNW	15784	CO-60	9.3E-09	1.7E-15	2.2E-15
WNW	15784	CS-137	4.7E-07	8.5E-14	1.1E-13
WNW	15784	BA-137M	1.7E-13	3.0E-20	3.9E-20
WNW	15784	EU-154	2.5E-09	4.6E-16	6.1E-16
WNW	15784	NI-63	1.5E-08	2.6E-15	3.5E-15
WNW	15784	PU-238	6.3E-10	1.1E-16	1.5E-16
WNW	15784	PU-239	8.1E-10	1.5E-16	2.0E-16
WNW	15784	PU-240	8.1E-10	1.5E-16	2.0E-16
WNW	15844	AM-241	1.8E-10	3.2E-17	4.3E-17
WNW	15844	CO-60	9.2E-09	1.7E-15	2.2E-15
WNW	15844	CS-137	4.7E-07	8.5E-14	1.1E-13
WNW	15844	BA-137M	1.6E-13	2.8E-20	3.7E-20
WNW	15844	EU-154	2.5E-09	4.6E-16	6.1E-16
WNW	15844	NI-63	1.5E-08	2.6E-15	3.5E-15
WNW	15844	PU-238	6.3E-10	1.1E-16	1.5E-16
WNW	15844	PU-239	8.1E-10	1.5E-16	1.9E-16
IW	15844	PU-240	8.1E-10	1.5E-16	1.9E-16
NW	16323	AM-241	1.7E-10	3.1E-17	4.1E-17
WNW	16323	CO-60	8.9E-09	1.6E-15	2.1E-15
WNW	16323	CS-137	4.6E-07	8.2E-14	1.1E-13

ESTIMATED RADIONUCLIDE CONCENTRATIONS
AT VARIOUS LOCATIONS IN THE ENVIRONMENT

Wind Toward	Distance (meters)	Nuclide	Dry	Wet	Ground
			Air Concentration (pCi/m ³)	Deposition Rate (pCi/cm ² /s)	Deposition Rate (pCi/cm ² /s)
WNW	16323	BA-137M	1.1E-13	1.9E-20	2.5E-20
WNW	16323	EU-154	2.5E-09	4.4E-16	5.9E-16
WNW	16323	NI-63	1.4E-08	2.5E-15	3.4E-15
WNW	16323	PU-238	6.1E-10	1.1E-16	1.5E-16
WNW	16323	PU-239	7.8E-10	1.4E-16	1.9E-16
WNW	16323	PU-240	7.8E-10	1.4E-16	1.9E-16
WNW	17329	AM-241	1.6E-10	2.9E-17	3.9E-17
WNW	17329	CO-60	8.4E-09	1.5E-15	2.0E-15
WNW	17329	CS-137	4.3E-07	7.7E-14	1.0E-13
WNW	17329	BA-137M	4.6E-14	8.4E-21	1.1E-20
WNW	17329	EU-154	2.3E-09	4.1E-16	5.5E-16
WNW	17329	NI-63	1.3E-08	2.4E-15	3.2E-15
WNW	17329	PU-238	5.7E-10	1.0E-16	1.4E-16
WNW	17329	PU-239	7.3E-10	1.3E-16	1.8E-16
WNW	17329	PU-240	7.3E-10	1.3E-16	1.8E-16
W	10344	AM-241	4.2E-10	7.6E-17	8.7E-17
W	10344	CO-60	2.2E-08	4.0E-15	4.5E-15
W	10344	CS-137	1.1E-06	2.0E-13	2.3E-13
W	10344	BA-137M	4.1E-11	7.5E-18	5.3E-18
W	10344	EU-154	6.0E-09	1.1E-15	1.2E-15
W	10344	NI-63	3.5E-08	6.3E-15	7.2E-15
W	10344	PU-238	1.5E-09	2.7E-16	3.1E-16
W	10344	PU-239	1.9E-09	3.5E-16	4.0E-16
W	10344	PU-240	1.9E-09	3.5E-16	4.0E-16
W	10365	AM-241	4.2E-10	7.6E-17	8.7E-17
W	10365	CO-60	2.2E-08	3.9E-15	4.5E-15
W	10365	CS-137	1.1E-06	2.0E-13	2.3E-13
W	10365	BA-137M	4.1E-11	7.3E-18	5.2E-18
W	10365	EU-154	6.0E-09	1.1E-15	1.2E-15
W	10365	NI-63	3.5E-08	6.2E-15	7.2E-15
W	10365	PU-238	1.5E-09	2.7E-16	3.1E-16
W	10365	PU-239	1.9E-09	3.5E-16	4.0E-16
W	10365	PU-240	1.9E-09	3.5E-16	4.0E-16
W	10472	AM-241	4.2E-10	7.5E-17	8.6E-17
W	10472	CO-60	2.2E-08	3.9E-15	4.5E-15
W	10472	CS-137	1.1E-06	2.0E-13	2.3E-13
W	10472	BA-137M	3.7E-11	6.6E-18	4.8E-18
W	10472	EU-154	5.9E-09	1.1E-15	1.2E-15
W	10472	NI-63	3.4E-08	6.2E-15	7.1E-15
W	10472	PU-238	1.5E-09	2.7E-16	3.1E-16
W	10472	PU-239	1.9E-09	3.4E-16	3.9E-16
W	10472	PU-240	1.9E-09	3.4E-16	3.9E-16
W	10590	AM-241	4.1E-10	7.4E-17	8.5E-17
W	10590	CO-60	2.1E-08	3.8E-15	4.4E-15
W	10590	CS-137	1.1E-06	2.0E-13	2.3E-13
W	10590	BA-137M	3.3E-11	6.0E-18	4.3E-18
W	10590	EU-154	5.9E-09	1.1E-15	1.2E-15

ESTIMATED RADIONUCLIDE CONCENTRATIONS
AT VARIOUS LOCATIONS IN THE ENVIRONMENT

Wind Toward	Distance (meters)	Nuclide	Dry	Wet	Ground
			Air Concentration (pCi/m ³)	Deposition Rate (pCi/cm ² /s)	Deposition Rate (pCi/cm ² /s)
W	10590	NI-63	3.4E-08	6.1E-15	7.0E-15
W	10590	PU-238	1.5E-09	2.6E-16	3.0E-16
W	10590	PU-239	1.9E-09	3.4E-16	3.9E-16
W	10590	PU-240	1.9E-09	3.4E-16	3.9E-16
W	11103	AM-241	3.9E-10	7.0E-17	8.1E-17
W	11103	CO-60	2.0E-08	3.6E-15	4.2E-15
W	11103	CS-137	1.0E-06	1.9E-13	2.2E-13
W	11103	BA-137M	2.1E-11	3.8E-18	2.8E-18
W	11103	EU-154	5.5E-09	1.0E-15	1.2E-15
W	11103	NI-63	3.2E-08	5.8E-15	6.7E-15
W	11103	PU-238	1.4E-09	2.5E-16	2.9E-16
W	11103	PU-239	1.8E-09	3.2E-16	3.7E-16
W	11103	PU-240	1.8E-09	3.2E-16	3.7E-16
W	11989	AM-241	3.5E-10	6.4E-17	7.5E-17
W	11989	CO-60	1.8E-08	3.3E-15	3.9E-15
W	11989	CS-137	9.4E-07	1.7E-13	2.0E-13
W	11989	BA-137M	9.5E-12	1.7E-18	1.3E-18
W	11989	EU-154	5.1E-09	9.1E-16	1.1E-15
W	11989	NI-63	2.9E-08	5.3E-15	6.2E-15
W	11989	PU-238	1.3E-09	2.3E-16	2.7E-16
W	11989	PU-239	1.6E-09	2.9E-16	3.4E-16
W	11989	PU-240	1.6E-09	2.9E-16	3.4E-16
W	13245	AM-241	3.2E-10	5.7E-17	6.8E-17
W	13245	CO-60	1.6E-08	3.0E-15	3.5E-15
W	13245	CS-137	8.4E-07	1.5E-13	1.8E-13
W	13245	BA-137M	3.2E-12	5.7E-19	4.5E-19
W	13245	EU-154	4.5E-09	8.1E-16	9.7E-16
W	13245	NI-63	2.6E-08	4.7E-15	5.6E-15
W	13245	PU-238	1.1E-09	2.0E-16	2.4E-16
W	13245	PU-239	1.4E-09	2.6E-16	3.1E-16
W	13245	PU-240	1.4E-09	2.6E-16	3.1E-16
W	13286	AM-241	3.1E-10	5.7E-17	6.7E-17
W	13286	CO-60	1.6E-08	2.9E-15	3.5E-15
W	13286	CS-137	8.4E-07	1.5E-13	1.8E-13
W	13286	BA-137M	3.1E-12	5.5E-19	4.4E-19
W	13286	EU-154	4.5E-09	8.1E-16	9.6E-16
W	13286	NI-63	2.6E-08	4.7E-15	5.6E-15
W	13286	PU-238	1.1E-09	2.0E-16	2.4E-16
W	13286	PU-239	1.4E-09	2.6E-16	3.1E-16
W	13286	PU-240	1.4E-09	2.6E-16	3.1E-16
W	13483	AM-241	3.1E-10	5.6E-17	6.6E-17
W	13483	CO-60	1.6E-08	2.9E-15	3.5E-15
W	13483	CS-137	8.2E-07	1.5E-13	1.8E-13
W	13483	BA-137M	2.6E-12	4.7E-19	3.7E-19
W	13483	EU-154	4.4E-09	7.9E-16	9.5E-16
W	13483	NI-63	2.5E-08	4.6E-15	5.5E-15
W	13483	PU-238	1.1E-09	2.0E-16	2.4E-16

ESTIMATED RADIONUCLIDE CONCENTRATIONS
AT VARIOUS LOCATIONS IN THE ENVIRONMENT

Wind Toward	Distance (meters)	Nuclide	Dry	Wet	Ground
			Air Concentration (pCi/m ³)	Deposition Rate (pCi/cm ² /s)	Deposition Rate (pCi/cm ² /s)
W	13483	PU-239	1.4E-09	2.5E-16	3.0E-16
W	13483	PU-240	1.4E-09	2.5E-16	3.0E-16
W	13612	AM-241	3.1E-10	5.5E-17	6.6E-17
W	13612	CO-60	1.6E-08	2.9E-15	3.4E-15
W	13612	CS-137	8.1E-07	1.5E-13	1.7E-13
W	13612	BA-137M	2.3E-12	4.2E-19	3.3E-19
W	13612	EU-154	4.4E-09	7.9E-16	9.4E-16
W	13612	NI-63	2.5E-08	4.5E-15	5.4E-15
W	13612	PU-238	1.1E-09	2.0E-16	2.3E-16
W	13612	PU-239	1.4E-09	2.5E-16	3.0E-16
W	13612	PU-240	1.4E-09	2.5E-16	3.0E-16
W	13664	AM-241	3.0E-10	5.5E-17	6.6E-17
W	13664	CO-60	1.6E-08	2.9E-15	3.4E-15
W	13664	CS-137	8.1E-07	1.5E-13	1.7E-13
W	13664	BA-137M	2.2E-12	4.0E-19	3.2E-19
W	13664	EU-154	4.3E-09	7.8E-16	9.4E-16
W	13664	NI-63	2.5E-08	4.5E-15	5.4E-15
W	13664	PU-238	1.1E-09	2.0E-16	2.3E-16
W	13664	PU-239	1.4E-09	2.5E-16	3.0E-16
W	13664	PU-240	1.4E-09	2.5E-16	3.0E-16
W	13959	AM-241	3.0E-10	5.3E-17	6.4E-17
W	13959	CO-60	1.5E-08	2.8E-15	3.3E-15
W	13959	CS-137	7.9E-07	1.4E-13	1.7E-13
W	13959	BA-137M	1.7E-12	3.1E-19	2.5E-19
W	13959	EU-154	4.2E-09	7.6E-16	9.2E-16
W	13959	NI-63	2.4E-08	4.4E-15	5.3E-15
W	13959	PU-238	1.1E-09	1.9E-16	2.3E-16
W	13959	PU-239	1.4E-09	2.4E-16	2.9E-16
W	13959	PU-240	1.4E-09	2.4E-16	2.9E-16
W	14258	AM-241	2.9E-10	5.2E-17	6.3E-17
W	14258	CO-60	1.5E-08	2.7E-15	3.3E-15
W	14258	CS-137	7.7E-07	1.4E-13	1.7E-13
W	14258	BA-137M	1.3E-12	2.4E-19	1.9E-19
W	14258	EU-154	4.1E-09	7.4E-16	9.0E-16
W	14258	NI-63	2.4E-08	4.3E-15	5.2E-15
W	14258	PU-238	1.0E-09	1.9E-16	2.2E-16
W	14258	PU-239	1.3E-09	2.4E-16	2.9E-16
W	14258	PU-240	1.3E-09	2.4E-16	2.9E-16
W	14374	AM-241	2.9E-10	5.2E-17	6.2E-17
W	14374	CO-60	1.5E-08	2.7E-15	3.2E-15
W	14374	CS-137	7.6E-07	1.4E-13	1.7E-13
W	14374	BA-137M	1.2E-12	2.2E-19	1.8E-19
W	14374	EU-154	4.1E-09	7.4E-16	8.9E-16
W	14374	NI-63	2.4E-08	4.3E-15	5.1E-15
W	14374	PU-238	1.0E-09	1.8E-16	2.2E-16
W	14374	PU-239	1.3E-09	2.4E-16	2.8E-16
W	14374	PU-240	1.3E-09	2.4E-16	2.8E-16

ESTIMATED RADIONUCLIDE CONCENTRATIONS
AT VARIOUS LOCATIONS IN THE ENVIRONMENT

Wind Toward	Distance (meters)	Nuclide	Dry	Wet	Ground
			Air Concentration (pCi/m ³)	Deposition Rate (pCi/cm ² /s)	Deposition Rate (pCi/cm ² /s)
W	15241	AM-241	2.7E-10	4.8E-17	5.9E-17
W	15241	CO-60	1.4E-08	2.5E-15	3.1E-15
W	15241	CS-137	7.1E-07	1.3E-13	1.6E-13
W	15241	BA-137M	5.7E-13	1.0E-19	8.6E-20
W	15241	EU-154	3.8E-09	6.9E-16	8.4E-16
W	15241	NI-63	2.2E-08	4.0E-15	4.8E-15
W	15241	PU-238	9.6E-10	1.7E-16	2.1E-16
W	15241	PU-239	1.2E-09	2.2E-16	2.7E-16
W	15241	PU-240	1.2E-09	2.2E-16	2.7E-16
W	15441	AM-241	2.6E-10	4.7E-17	5.8E-17
W	15441	CO-60	1.4E-08	2.5E-15	3.0E-15
W	15441	CS-137	7.0E-07	1.3E-13	1.5E-13
W	15441	BA-137M	4.9E-13	8.7E-20	7.3E-20
W	15441	EU-154	3.8E-09	6.8E-16	8.3E-16
W	15441	NI-63	2.2E-08	3.9E-15	4.8E-15
W	15441	PU-238	9.4E-10	1.7E-16	2.1E-16
W	15441	PU-239	1.2E-09	2.2E-16	2.6E-16
W	15441	PU-240	1.2E-09	2.2E-16	2.6E-16
W	15784	AM-241	2.6E-10	4.6E-17	5.6E-17
W	15784	CO-60	1.3E-08	2.4E-15	2.9E-15
W	15784	CS-137	6.8E-07	1.2E-13	1.5E-13
W	15784	BA-137M	3.6E-13	6.5E-20	5.5E-20
W	15784	EU-154	3.7E-09	6.6E-16	8.1E-16
W	15784	NI-63	2.1E-08	3.8E-15	4.7E-15
W	15784	PU-238	9.2E-10	1.7E-16	2.0E-16
W	15784	PU-239	1.2E-09	2.1E-16	2.6E-16
W	15784	PU-240	1.2E-09	2.1E-16	2.6E-16
W	15844	AM-241	2.6E-10	4.6E-17	5.6E-17
W	15844	CO-60	1.3E-08	2.4E-15	2.9E-15
W	15844	CS-137	6.8E-07	1.2E-13	1.5E-13
W	15844	BA-137M	3.5E-13	6.2E-20	5.3E-20
W	15844	EU-154	3.7E-09	6.6E-16	8.0E-16
W	15844	NI-63	2.1E-08	3.8E-15	4.6E-15
W	15844	PU-238	9.1E-10	1.6E-16	2.0E-16
W	15844	PU-239	1.2E-09	2.1E-16	2.6E-16
W	15844	PU-240	1.2E-09	2.1E-16	2.6E-16
W	16323	AM-241	2.5E-10	4.5E-17	5.5E-17
W	16323	CO-60	1.3E-08	2.3E-15	2.8E-15
W	16323	CS-137	6.6E-07	1.2E-13	1.5E-13
W	16323	BA-137M	2.3E-13	4.1E-20	3.6E-20
W	16323	EU-154	3.5E-09	6.4E-16	7.8E-16
W	16323	NI-63	2.0E-08	3.7E-15	4.5E-15
W	16323	PU-238	8.8E-10	1.6E-16	1.9E-16
W	16323	PU-239	1.1E-09	2.0E-16	2.5E-16
W	16323	PU-240	1.1E-09	2.0E-16	2.5E-16
W	17329	AM-241	2.3E-10	4.2E-17	5.1E-17
W	17329	CO-60	1.2E-08	2.2E-15	2.7E-15

ESTIMATED RADIONUCLIDE CONCENTRATIONS
AT VARIOUS LOCATIONS IN THE ENVIRONMENT

Wind Toward	Distance (meters)	Nuclide	Dry	Wet	Ground
			Air Concentration (pCi/m ³)	Deposition Rate (pCi/cm ² /s)	Deposition Rate (pCi/cm ² /s)
W	17329	CS-137	6.1E-07	1.1E-13	2.5E-13
W	17329	BA-137M	9.9E-14	1.8E-20	3.3E-20
W	17329	EU-154	3.3E-09	5.9E-16	1.3E-15
W	17329	NI-63	1.9E-08	3.4E-15	7.7E-15
W	17329	PU-238	8.2E-10	1.5E-16	3.3E-16
W	17329	PU-239	1.1E-09	1.9E-16	4.2E-16
W	17329	PU-240	1.1E-09	1.9E-16	4.2E-16
WSW	10344	AM-241	6.9E-10	1.3E-16	2.4E-16
WSW	10344	CO-60	3.6E-08	6.5E-15	1.2E-14
WSW	10344	CS-137	1.8E-06	3.3E-13	6.3E-13
WSW	10344	BA-137M	4.0E-11	7.2E-18	1.3E-17
WSW	10344	EU-154	9.9E-09	1.8E-15	3.4E-15
WSW	10344	NI-63	5.7E-08	1.0E-14	1.9E-14
WSW	10344	PU-238	2.5E-09	4.5E-16	8.4E-16
WSW	10344	PU-239	3.2E-09	5.7E-16	1.1E-15
WSW	10344	PU-240	3.2E-09	5.7E-16	1.1E-15
WSW	10365	AM-241	6.9E-10	1.2E-16	2.4E-16
WSW	10365	CO-60	3.6E-08	6.5E-15	1.2E-14
WSW	10365	CS-137	1.8E-06	3.3E-13	6.3E-13
WSW	10365	BA-137M	3.9E-11	7.1E-18	1.3E-17
WSW	10365	EU-154	9.9E-09	1.8E-15	3.4E-15
WSW	10365	NI-63	5.7E-08	1.0E-14	1.9E-14
WSW	10365	PU-238	2.5E-09	4.5E-16	8.4E-16
WSW	10365	PU-239	3.2E-09	5.7E-16	1.1E-15
WSW	10365	PU-240	3.2E-09	5.7E-16	1.1E-15
WSW	10472	AM-241	6.8E-10	1.2E-16	2.3E-16
WSW	10472	CO-60	3.6E-08	6.4E-15	1.2E-14
WSW	10472	CS-137	1.8E-06	3.3E-13	6.2E-13
WSW	10472	BA-137M	3.6E-11	6.4E-18	1.2E-17
WSW	10472	EU-154	9.8E-09	1.8E-15	3.3E-15
WSW	10472	NI-63	5.6E-08	1.0E-14	1.9E-14
WSW	10472	PU-238	2.4E-09	4.4E-16	8.3E-16
WSW	10472	PU-239	3.1E-09	5.6E-16	1.1E-15
WSW	10472	PU-240	3.1E-09	5.6E-16	1.1E-15
WSW	10590	AM-241	6.7E-10	1.2E-16	2.3E-16
WSW	10590	CO-60	3.5E-08	6.3E-15	1.2E-14
WSW	10590	CS-137	1.8E-06	3.2E-13	6.1E-13
WSW	10590	BA-137M	3.2E-11	5.8E-18	1.1E-17
WSW	10590	EU-154	9.6E-09	1.7E-15	3.3E-15
WSW	10590	NI-63	5.6E-08	1.0E-14	1.9E-14
WSW	10590	PU-238	2.4E-09	4.3E-16	8.2E-16
WSW	10590	PU-239	3.1E-09	5.5E-16	1.1E-15
WSW	10590	PU-240	3.1E-09	5.5E-16	1.1E-15
WSW	11103	AM-241	6.3E-10	1.1E-16	2.2E-16
WSW	11103	CO-60	3.3E-08	5.9E-15	1.1E-14
WSW	11103	CS-137	1.7E-06	3.0E-13	5.8E-13
WSW	11103	BA-137M	2.0E-11	3.7E-18	6.8E-18

ESTIMATED RADIONUCLIDE CONCENTRATIONS
AT VARIOUS LOCATIONS IN THE ENVIRONMENT

Wind Toward	Distance (meters)	Nuclide	Dry	Wet	Ground
			Air Concentration (pCi/m ³)	Deposition Rate (pCi/cm ² /s)	Deposition Rate (pCi/cm ² /s)
WSW	11103	EU-154	9.0E-09	1.6E-15	3.1E-15
WSW	11103	NI-63	5.2E-08	9.4E-15	1.8E-14
WSW	11103	PU-238	2.3E-09	4.1E-16	7.8E-16
WSW	11103	PU-239	2.9E-09	5.2E-16	9.9E-16
WSW	11103	PU-240	2.9E-09	5.2E-16	9.9E-16
WSW	11989	AM-241	5.7E-10	1.0E-16	9.6E-17
WSW	11989	CO-60	3.0E-08	5.4E-15	5.0E-15
WSW	11989	CS-137	1.5E-06	2.7E-13	2.5E-13
WSW	11989	BA-137M	9.3E-12	1.7E-18	1.5E-18
WSW	11989	EU-154	8.2E-09	1.5E-15	1.4E-15
WSW	11989	NI-63	4.7E-08	8.5E-15	7.9E-15
WSW	11989	PU-238	2.0E-09	3.7E-16	3.4E-16
WSW	11989	PU-239	2.6E-09	4.7E-16	4.4E-16
WSW	11989	PU-240	2.6E-09	4.7E-16	4.4E-16
WSW	13245	AM-241	5.0E-10	9.0E-17	8.6E-17
WSW	13245	CO-60	2.6E-08	4.7E-15	4.5E-15
WSW	13245	CS-137	1.3E-06	2.4E-13	2.3E-13
SW	13245	BA-137M	3.1E-12	5.6E-19	5.1E-19
WSW	13245	EU-154	7.2E-09	1.3E-15	1.2E-15
WSW	13245	NI-63	4.1E-08	7.4E-15	7.1E-15
WSW	13245	PU-238	1.8E-09	3.2E-16	3.1E-16
WSW	13245	PU-239	2.3E-09	4.1E-16	3.9E-16
WSW	13245	PU-240	2.3E-09	4.1E-16	3.9E-16
WSW	13286	AM-241	5.0E-10	9.0E-17	8.6E-17
WSW	13286	CO-60	2.6E-08	4.7E-15	4.5E-15
WSW	13286	CS-137	1.3E-06	2.4E-13	2.3E-13
WSW	13286	BA-137M	3.0E-12	5.4E-19	5.0E-19
WSW	13286	EU-154	7.1E-09	1.3E-15	1.2E-15
WSW	13286	NI-63	4.1E-08	7.4E-15	7.1E-15
WSW	13286	PU-238	1.8E-09	3.2E-16	3.1E-16
WSW	13286	PU-239	2.3E-09	4.1E-16	3.9E-16
WSW	13286	PU-240	2.3E-09	4.1E-16	3.9E-16
WSW	13483	AM-241	4.9E-10	8.8E-17	8.5E-17
WSW	13483	CO-60	2.6E-08	4.6E-15	4.4E-15
WSW	13483	CS-137	1.3E-06	2.3E-13	2.3E-13
WSW	13483	BA-137M	2.6E-12	4.6E-19	4.2E-19
WSW	13483	EU-154	7.0E-09	1.3E-15	1.2E-15
WSW	13483	NI-63	4.0E-08	7.3E-15	7.0E-15
WSW	13483	PU-238	1.7E-09	3.1E-16	3.0E-16
WSW	13483	PU-239	2.2E-09	4.0E-16	3.9E-16
WSW	13483	PU-240	2.2E-09	4.0E-16	3.9E-16
WSW	13612	AM-241	4.8E-10	8.7E-17	8.4E-17
WSW	13612	CO-60	2.5E-08	4.5E-15	4.4E-15
SW	13612	CS-137	1.3E-06	2.3E-13	2.2E-13
SW	13612	BA-137M	2.3E-12	4.1E-19	3.8E-19
WSW	13612	EU-154	6.9E-09	1.2E-15	1.2E-15
WSW	13612	NI-63	4.0E-08	7.2E-15	6.9E-15

ESTIMATED RADIONUCLIDE CONCENTRATIONS
AT VARIOUS LOCATIONS IN THE ENVIRONMENT

Wind Toward	Distance (meters)	Nuclide	Dry	Wet	Ground
			Air Concentration (pCi/m ³)	Deposition Rate (pCi/cm ² /s)	Deposition Rate (pCi/cm ² /s)
WSW	13612	PU-238	1.7E-09	3.1E-16	3.0E-16
WSW	13612	PU-239	2.2E-09	4.0E-16	3.8E-16
WSW	13612	PU-240	2.2E-09	4.0E-16	3.8E-16
WSW	13664	AM-241	4.8E-10	8.7E-17	8.4E-17
WSW	13664	CO-60	2.5E-08	4.5E-15	4.4E-15
WSW	13664	CS-137	1.3E-06	2.3E-13	2.2E-13
WSW	13664	BA-137M	2.2E-12	3.9E-19	3.6E-19
WSW	13664	EU-154	6.9E-09	1.2E-15	1.2E-15
WSW	13664	NI-63	4.0E-08	7.1E-15	6.9E-15
WSW	13664	PU-238	1.7E-09	3.1E-16	3.0E-16
WSW	13664	PU-239	2.2E-09	4.0E-16	3.8E-16
WSW	13664	PU-240	2.2E-09	4.0E-16	3.8E-16
WSW	13959	AM-241	4.7E-10	8.4E-17	8.2E-17
WSW	13959	CO-60	2.4E-08	4.4E-15	4.3E-15
WSW	13959	CS-137	1.2E-06	2.2E-13	2.2E-13
WSW	13959	BA-137M	1.7E-12	3.1E-19	2.8E-19
WSW	13959	EU-154	6.7E-09	1.2E-15	1.2E-15
WSW	13959	NI-63	3.9E-08	6.9E-15	6.8E-15
WSW	13959	PU-238	1.7E-09	3.0E-16	2.9E-16
WSW	13959	PU-239	2.1E-09	3.8E-16	3.7E-16
WSW	13959	PU-240	2.1E-09	3.8E-16	3.7E-16
WSW	14258	AM-241	4.6E-10	8.2E-17	8.0E-17
WSW	14258	CO-60	2.4E-08	4.3E-15	4.2E-15
WSW	14258	CS-137	1.2E-06	2.2E-13	2.1E-13
WSW	14258	BA-137M	1.3E-12	2.4E-19	2.2E-19
WSW	14258	EU-154	6.5E-09	1.2E-15	1.1E-15
WSW	14258	NI-63	3.8E-08	6.8E-15	6.6E-15
WSW	14258	PU-238	1.6E-09	2.9E-16	2.9E-16
WSW	14258	PU-239	2.1E-09	3.7E-16	3.7E-16
WSW	14258	PU-240	2.1E-09	3.7E-16	3.7E-16
WSW	14374	AM-241	4.5E-10	8.1E-17	7.9E-17
WSW	14374	CO-60	2.3E-08	4.2E-15	4.1E-15
WSW	14374	CS-137	1.2E-06	2.2E-13	2.1E-13
WSW	14374	BA-137M	1.2E-12	2.1E-19	2.0E-19
WSW	14374	EU-154	6.4E-09	1.2E-15	1.1E-15
WSW	14374	NI-63	3.7E-08	6.7E-15	6.6E-15
WSW	14374	PU-238	1.6E-09	2.9E-16	2.8E-16
WSW	14374	PU-239	2.1E-09	3.7E-16	3.6E-16
WSW	14374	PU-240	2.1E-09	3.7E-16	3.6E-16
WSW	15241	AM-241	4.2E-10	7.5E-17	7.5E-17
WSW	15241	CO-60	2.2E-08	3.9E-15	3.9E-15
WSW	15241	CS-137	1.1E-06	2.0E-13	2.0E-13
WSW	15241	BA-137M	5.7E-13	1.0E-19	9.8E-20
WSW	15241	EU-154	6.0E-09	1.1E-15	1.1E-15
WSW	15241	NI-63	3.4E-08	6.2E-15	6.2E-15
WSW	15241	PU-238	1.5E-09	2.7E-16	2.7E-16
WSW	15241	PU-239	1.9E-09	3.4E-16	3.4E-16

ESTIMATED RADIONUCLIDE CONCENTRATIONS
AT VARIOUS LOCATIONS IN THE ENVIRONMENT

Wind Toward	Distance (meters)	Nuclide	Dry	Wet	Ground
			Air Concentration (pCi/m ³)	Deposition Rate (pCi/cm ² /s)	Deposition Rate (pCi/cm ² /s)
WSW	15241	PU-240	1.9E-09	3.4E-16	6.8E-16
WSW	15441	AM-241	4.1E-10	7.4E-17	1.5E-16
WSW	15441	CO-60	2.1E-08	3.8E-15	7.7E-15
WSW	15441	CS-137	1.1E-06	2.0E-13	3.9E-13
WSW	15441	BA-137M	4.8E-13	8.7E-20	1.7E-19
WSW	15441	EU-154	5.9E-09	1.1E-15	2.1E-15
WSW	15441	NI-63	3.4E-08	6.1E-15	1.2E-14
WSW	15441	PU-238	1.5E-09	2.6E-16	5.3E-16
WSW	15441	PU-239	1.9E-09	3.4E-16	6.7E-16
WSW	15441	PU-240	1.9E-09	3.4E-16	6.7E-16
WSW	15784	AM-241	4.0E-10	7.2E-17	1.4E-16
WSW	15784	CO-60	2.1E-08	3.7E-15	7.5E-15
WSW	15784	CS-137	1.1E-06	1.9E-13	3.8E-13
WSW	15784	BA-137M	3.6E-13	6.5E-20	1.3E-19
WSW	15784	EU-154	5.7E-09	1.0E-15	2.1E-15
WSW	15784	NI-63	3.3E-08	5.9E-15	1.2E-14
WSW	15784	PU-238	1.4E-09	2.6E-16	5.1E-16
WSW	15784	PU-239	1.8E-09	3.3E-16	6.6E-16
WSW	15784	PU-240	1.8E-09	3.3E-16	6.6E-16
WSW	15844	AM-241	4.0E-10	7.1E-17	1.4E-16
WSW	15844	CO-60	2.1E-08	3.7E-15	7.5E-15
WSW	15844	CS-137	1.1E-06	1.9E-13	3.8E-13
WSW	15844	BA-137M	3.4E-13	6.2E-20	1.2E-19
WSW	15844	EU-154	5.7E-09	1.0E-15	2.0E-15
WSW	15844	NI-63	3.3E-08	5.9E-15	1.2E-14
WSW	15844	PU-238	1.4E-09	2.5E-16	5.1E-16
WSW	15844	PU-239	1.8E-09	3.3E-16	6.5E-16
WSW	15844	PU-240	1.8E-09	3.3E-16	6.5E-16
WSW	16323	AM-241	3.8E-10	6.9E-17	1.4E-16
WSW	16323	CO-60	2.0E-08	3.6E-15	7.2E-15
WSW	16323	CS-137	1.0E-06	1.8E-13	3.7E-13
WSW	16323	BA-137M	2.3E-13	4.2E-20	8.2E-20
WSW	16323	EU-154	5.4E-09	9.8E-16	2.0E-15
WSW	16323	NI-63	3.1E-08	5.7E-15	1.1E-14
WSW	16323	PU-238	1.4E-09	2.4E-16	4.9E-16
WSW	16323	PU-239	1.7E-09	3.1E-16	6.3E-16
WSW	16323	PU-240	1.7E-09	3.1E-16	6.3E-16
WSW	17329	AM-241	3.5E-10	6.3E-17	1.3E-16
WSW	17329	CO-60	1.8E-08	3.3E-15	6.7E-15
WSW	17329	CS-137	9.4E-07	1.7E-13	3.4E-13
WSW	17329	BA-137M	1.0E-13	1.8E-20	3.6E-20
WSW	17329	EU-154	5.0E-09	9.1E-16	1.8E-15
WSW	17329	NI-63	2.9E-08	5.2E-15	1.1E-14
WSW	17329	PU-238	1.3E-09	2.3E-16	4.6E-16
WSW	17329	PU-239	1.6E-09	2.9E-16	5.9E-16
WSW	17329	PU-240	1.6E-09	2.9E-16	5.9E-16
SW	10344	AM-241	1.2E-09	2.2E-16	3.4E-16

ESTIMATED RADIONUCLIDE CONCENTRATIONS
AT VARIOUS LOCATIONS IN THE ENVIRONMENT

Wind Toward	Distance (meters)	Nuclide	Dry	Wet	Ground
			Air Concentration (pCi/m ³)	Deposition Rate (pCi/cm ² /s)	Deposition Rate (pCi/cm ² /s)
SW	10344	CO-60	6.2E-08	1.1E-14	6.6E-15
SW	10344	CS-137	3.2E-06	5.7E-13	3.4E-13
SW	10344	BA-137M	8.8E-11	1.6E-17	7.4E-18
SW	10344	EU-154	1.7E-08	3.1E-15	1.8E-15
SW	10344	NI-63	9.9E-08	1.8E-14	1.0E-14
SW	10344	PU-238	4.3E-09	7.7E-16	4.5E-16
SW	10344	PU-239	5.5E-09	9.8E-16	5.8E-16
SW	10344	PU-240	5.5E-09	9.8E-16	5.8E-16
SW	10365	AM-241	1.2E-09	2.1E-16	1.3E-16
SW	10365	CO-60	6.2E-08	1.1E-14	6.6E-15
SW	10365	CS-137	3.2E-06	5.7E-13	3.3E-13
SW	10365	BA-137M	8.7E-11	1.6E-17	7.3E-18
SW	10365	EU-154	1.7E-08	3.1E-15	1.8E-15
SW	10365	NI-63	9.8E-08	1.8E-14	1.0E-14
SW	10365	PU-238	4.2E-09	7.6E-16	4.5E-16
SW	10365	PU-239	5.4E-09	9.8E-16	5.7E-16
SW	10365	PU-240	5.4E-09	9.8E-16	5.7E-16
SW	10472	AM-241	1.2E-09	2.1E-16	1.2E-16
SW	10472	CO-60	6.1E-08	1.1E-14	6.5E-15
SW	10472	CS-137	3.1E-06	5.6E-13	3.3E-13
SW	10472	BA-137M	7.8E-11	1.4E-17	6.6E-18
SW	10472	EU-154	1.7E-08	3.0E-15	1.8E-15
SW	10472	NI-63	9.7E-08	1.7E-14	1.0E-14
SW	10472	PU-238	4.2E-09	7.5E-16	4.4E-16
SW	10472	PU-239	5.4E-09	9.7E-16	5.7E-16
SW	10472	PU-240	5.4E-09	9.7E-16	5.7E-16
SW	10590	AM-241	1.2E-09	2.1E-16	1.2E-16
SW	10590	CO-60	6.0E-08	1.1E-14	6.4E-15
SW	10590	CS-137	3.1E-06	5.5E-13	3.3E-13
SW	10590	BA-137M	7.0E-11	1.3E-17	6.0E-18
SW	10590	EU-154	1.6E-08	3.0E-15	1.8E-15
SW	10590	NI-63	9.5E-08	1.7E-14	1.0E-14
SW	10590	PU-238	4.1E-09	7.4E-16	4.4E-16
SW	10590	PU-239	5.3E-09	9.5E-16	5.6E-16
SW	10590	PU-240	5.3E-09	9.5E-16	5.6E-16
SW	11103	AM-241	1.1E-09	1.9E-16	1.2E-16
SW	11103	CO-60	5.6E-08	1.0E-14	6.1E-15
SW	11103	CS-137	2.9E-06	5.2E-13	3.1E-13
SW	11103	BA-137M	4.4E-11	7.8E-18	3.8E-18
SW	11103	EU-154	1.5E-08	2.8E-15	1.7E-15
SW	11103	NI-63	8.9E-08	1.6E-14	9.7E-15
SW	11103	PU-238	3.8E-09	6.9E-16	4.2E-16
SW	11103	PU-239	4.9E-09	8.9E-16	5.4E-16
SW	11103	PU-240	4.9E-09	8.9E-16	5.4E-16
SW	11989	AM-241	9.6E-10	1.7E-16	1.1E-16
SW	11989	CO-60	5.0E-08	9.0E-15	5.6E-15
SW	11989	CS-137	2.6E-06	4.6E-13	2.9E-13

ESTIMATED RADIONUCLIDE CONCENTRATIONS
AT VARIOUS LOCATIONS IN THE ENVIRONMENT

Wind Toward	Distance (meters)	Nuclide	Dry	Wet	Ground
			Air Concentration (pCi/m ³)	Deposition Rate (pCi/cm ² /s)	Deposition Rate (pCi/cm ² /s)
SW	11989	BA-137M	1.9E-11	3.5E-18	5.3E-18
SW	11989	EU-154	1.4E-08	2.5E-15	4.0E-15
SW	11989	NI-63	7.9E-08	1.4E-14	8.9E-15
SW	11989	PU-238	3.4E-09	6.2E-16	3.9E-16
SW	11989	PU-239	4.4E-09	7.9E-16	5.0E-16
SW	11989	PU-240	4.4E-09	7.9E-16	5.0E-16
SW	13245	AM-241	8.3E-10	1.5E-16	9.8E-17
SW	13245	CO-60	4.3E-08	7.8E-15	5.1E-15
SW	13245	CS-137	2.2E-06	4.0E-13	2.6E-13
SW	13245	BA-137M	6.4E-12	1.1E-18	6.2E-19
SW	13245	EU-154	1.2E-08	2.1E-15	1.4E-15
SW	13245	NI-63	6.9E-08	1.2E-14	8.1E-15
SW	13245	PU-238	3.0E-09	5.4E-16	3.5E-16
SW	13245	PU-239	3.8E-09	6.9E-16	4.5E-16
SW	13245	PU-240	3.8E-09	6.9E-16	4.5E-16
SW	13286	AM-241	8.3E-10	1.5E-16	9.8E-17
SW	13286	CO-60	4.3E-08	7.8E-15	5.1E-15
SW	13286	CS-137	2.2E-06	4.0E-13	2.6E-13
SW	13286	BA-137M	6.1E-12	1.1E-18	6.0E-19
SW	13286	EU-154	1.2E-08	2.1E-15	1.4E-15
SW	13286	NI-63	6.8E-08	1.2E-14	8.1E-15
SW	13286	PU-238	3.0E-09	5.3E-16	3.5E-16
SW	13286	PU-239	3.8E-09	6.8E-16	4.5E-16
SW	13286	PU-240	3.8E-09	6.8E-16	4.5E-16
SW	13483	AM-241	8.1E-10	1.5E-16	9.6E-17
SW	13483	CO-60	4.2E-08	7.6E-15	5.0E-15
SW	13483	CS-137	2.2E-06	3.9E-13	2.6E-13
SW	13483	BA-137M	5.2E-12	9.3E-19	5.1E-19
SW	13483	EU-154	1.2E-08	2.1E-15	1.4E-15
SW	13483	NI-63	6.7E-08	1.2E-14	7.9E-15
SW	13483	PU-238	2.9E-09	5.2E-16	3.4E-16
SW	13483	PU-239	3.7E-09	6.7E-16	4.4E-16
SW	13483	PU-240	3.7E-09	6.7E-16	4.4E-16
SW	13612	AM-241	8.0E-10	1.4E-16	9.5E-17
SW	13612	CO-60	4.2E-08	7.5E-15	5.0E-15
SW	13612	CS-137	2.1E-06	3.8E-13	2.5E-13
SW	13612	BA-137M	4.6E-12	8.3E-19	4.6E-19
SW	13612	EU-154	1.1E-08	2.1E-15	1.4E-15
SW	13612	NI-63	6.6E-08	1.2E-14	7.9E-15
SW	13612	PU-238	2.9E-09	5.1E-16	3.4E-16
SW	13612	PU-239	3.7E-09	6.6E-16	4.4E-16
SW	13612	PU-240	3.7E-09	6.6E-16	4.4E-16
SW	13664	AM-241	8.0E-10	1.4E-16	9.5E-17
SW	13664	CO-60	4.2E-08	7.5E-15	4.9E-15
SW	13664	CS-137	2.1E-06	3.8E-13	2.5E-13
SW	13664	BA-137M	4.4E-12	7.9E-19	4.4E-19
SW	13664	EU-154	1.1E-08	2.0E-15	1.4E-15

ESTIMATED RADIONUCLIDE CONCENTRATIONS
AT VARIOUS LOCATIONS IN THE ENVIRONMENT

Wind Toward	Distance (meters)	Nuclide	Dry	Wet	Ground
			Air Concentration (pCi/m ³)	Deposition Rate (pCi/cm ² /s)	Deposition Rate (pCi/cm ² /s)
SW	13664	NI-63	6.6E-08	1.2E-14	7.8E-15
SW	13664	PU-238	2.8E-09	5.1E-16	3.4E-16
SW	13664	PU-239	3.6E-09	6.6E-16	4.3E-16
SW	13664	PU-240	3.6E-09	6.6E-16	4.3E-16
SW	13959	AM-241	7.7E-10	1.4E-16	9.3E-17
SW	13959	CO-60	4.0E-08	7.2E-15	4.8E-15
SW	13959	CS-137	2.1E-06	3.7E-13	2.5E-13
SW	13959	BA-137M	3.4E-12	6.1E-19	3.4E-19
SW	13959	EU-154	1.1E-08	2.0E-15	1.3E-15
SW	13959	NI-63	6.4E-08	1.1E-14	7.7E-15
SW	13959	PU-238	2.8E-09	5.0E-16	3.3E-16
SW	13959	PU-239	3.5E-09	6.4E-16	4.2E-16
SW	13959	PU-240	3.5E-09	6.4E-16	4.2E-16
SW	14258	AM-241	7.5E-10	1.3E-16	9.1E-17
SW	14258	CO-60	3.9E-08	7.0E-15	4.7E-15
SW	14258	CS-137	2.0E-06	3.6E-13	2.4E-13
SW	14258	BA-137M	2.6E-12	4.7E-19	2.7E-19
SW	14258	EU-154	1.1E-08	1.9E-15	1.3E-15
SW	14258	NI-63	6.2E-08	1.1E-14	7.5E-15
SW	14258	PU-238	2.7E-09	4.8E-16	3.2E-16
SW	14258	PU-239	3.4E-09	6.2E-16	4.1E-16
SW	14258	PU-240	3.4E-09	6.2E-16	4.1E-16
SW	14374	AM-241	7.4E-10	1.3E-16	9.0E-17
SW	14374	CO-60	3.9E-08	6.9E-15	4.7E-15
SW	14374	CS-137	2.0E-06	3.5E-13	2.4E-13
SW	14374	BA-137M	2.4E-12	4.3E-19	2.4E-19
SW	14374	EU-154	1.1E-08	1.9E-15	1.3E-15
SW	14374	NI-63	6.1E-08	1.1E-14	7.4E-15
SW	14374	PU-238	2.6E-09	4.8E-16	3.2E-16
SW	14374	PU-239	3.4E-09	6.1E-16	4.1E-16
SW	14374	PU-240	3.4E-09	6.1E-16	4.1E-16
SW	15241	AM-241	6.8E-10	1.2E-16	8.5E-17
SW	15241	CO-60	3.5E-08	6.4E-15	4.4E-15
SW	15241	CS-137	1.8E-06	3.3E-13	2.3E-13
SW	15241	BA-137M	1.1E-12	2.0E-19	1.2E-19
SW	15241	EU-154	9.7E-09	1.7E-15	1.2E-15
SW	15241	NI-63	5.6E-08	1.0E-14	7.0E-15
SW	15241	PU-238	2.4E-09	4.4E-16	3.0E-16
SW	15241	PU-239	3.1E-09	5.6E-16	3.9E-16
SW	15241	PU-240	3.1E-09	5.6E-16	3.9E-16
SW	15441	AM-241	6.7E-10	1.2E-16	8.4E-17
SW	15441	CO-60	3.5E-08	6.3E-15	4.4E-15
SW	15441	CS-137	1.8E-06	3.2E-13	2.2E-13
SW	15441	BA-137M	9.5E-13	1.7E-19	1.0E-19
SW	15441	EU-154	9.5E-09	1.7E-15	1.2E-15
SW	15441	NI-63	5.5E-08	9.9E-15	6.9E-15
SW	15441	PU-238	2.4E-09	4.3E-16	3.0E-16

ESTIMATED RADIONUCLIDE CONCENTRATIONS
AT VARIOUS LOCATIONS IN THE ENVIRONMENT

Wind Toward	Distance (meters)	Nuclide	Dry	Wet	Ground
			Air Concentration (pCi/m ³)	Deposition Rate (pCi/cm ² /s)	Deposition Rate (pCi/cm ² /s)
SW	15441	PU-239	3.0E-09	5.5E-16	3.8E-16
SW	15441	PU-240	3.0E-09	5.5E-16	3.8E-16
SW	15784	AM-241	6.5E-10	1.2E-16	8.2E-17
SW	15784	CO-60	3.4E-08	6.1E-15	4.3E-15
SW	15784	CS-137	1.7E-06	3.1E-13	2.2E-13
SW	15784	BA-137M	7.1E-13	1.3E-19	7.5E-20
SW	15784	EU-154	9.2E-09	1.7E-15	1.2E-15
SW	15784	NI-63	5.3E-08	9.6E-15	6.7E-15
SW	15784	PU-238	2.3E-09	4.2E-16	2.9E-16
SW	15784	PU-239	3.0E-09	5.3E-16	3.7E-16
SW	15784	PU-240	3.0E-09	5.3E-16	3.7E-16
SW	15844	AM-241	6.4E-10	1.2E-16	8.1E-17
SW	15844	CO-60	3.3E-08	6.0E-15	4.2E-15
SW	15844	CS-137	1.7E-06	3.1E-13	2.2E-13
SW	15844	BA-137M	6.7E-13	1.2E-19	7.2E-20
SW	15844	EU-154	9.2E-09	1.7E-15	1.2E-15
SW	15844	NI-63	5.3E-08	9.5E-15	6.7E-15
W	15844	PU-238	2.3E-09	4.1E-16	2.9E-16
SW	15844	PU-239	2.9E-09	5.3E-16	3.7E-16
SW	15844	PU-240	2.9E-09	5.3E-16	3.7E-16
SW	16323	AM-241	6.2E-10	1.1E-16	7.9E-17
SW	16323	CO-60	3.2E-08	5.8E-15	4.1E-15
SW	16323	CS-137	1.6E-06	2.9E-13	2.1E-13
SW	16323	BA-137M	4.5E-13	8.0E-20	4.8E-20
SW	16323	EU-154	8.8E-09	1.6E-15	1.1E-15
SW	16323	NI-63	5.1E-08	9.1E-15	6.5E-15
SW	16323	PU-238	2.2E-09	4.0E-16	2.8E-16
SW	16323	PU-239	2.8E-09	5.1E-16	3.6E-16
SW	16323	PU-240	2.8E-09	5.1E-16	3.6E-16
SW	17329	AM-241	5.6E-10	1.0E-16	7.4E-17
SW	17329	CO-60	2.9E-08	5.3E-15	3.9E-15
SW	17329	CS-137	1.5E-06	2.7E-13	2.0E-13
SW	17329	BA-137M	1.9E-13	3.4E-20	2.1E-20
SW	17329	EU-154	8.1E-09	1.5E-15	1.1E-15
SW	17329	NI-63	4.7E-08	8.4E-15	6.1E-15
SW	17329	PU-238	2.0E-09	3.6E-16	2.6E-16
SW	17329	PU-239	2.6E-09	4.6E-16	3.4E-16
SW	17329	PU-240	2.6E-09	4.6E-16	3.4E-16
SSW	10344	AM-241	5.6E-10	1.0E-16	5.7E-17
SSW	10344	CO-60	2.9E-08	5.2E-15	3.0E-15
SSW	10344	CS-137	1.5E-06	2.7E-13	1.5E-13
SSW	10344	BA-137M	7.3E-11	1.3E-17	5.5E-18
SSW	10344	EU-154	8.0E-09	1.4E-15	8.1E-16
W	10344	NI-63	4.6E-08	8.3E-15	4.7E-15
SW	10344	PU-238	2.0E-09	3.6E-16	2.0E-16
SSW	10344	PU-239	2.5E-09	4.6E-16	2.6E-16
SSW	10344	PU-240	2.5E-09	4.6E-16	2.6E-16

ESTIMATED RADIONUCLIDE CONCENTRATIONS
AT VARIOUS LOCATIONS IN THE ENVIRONMENT

Wind Toward	Distance (meters)	Nuclide	Dry	Wet	Ground
			Air Concentration (pCi/m3)	Deposition Rate (pCi/cm2/s)	Deposition Rate (pCi/cm2/s)
SSW	10365	AM-241	5.6E-10	1.0E-16	5.7E-17
SSW	10365	CO-60	2.9E-08	5.2E-15	3.0E-15
SSW	10365	CS-137	1.5E-06	2.7E-13	1.5E-13
SSW	10365	BA-137M	7.2E-11	1.3E-17	5.4E-18
SSW	10365	EU-154	7.9E-09	1.4E-15	8.1E-16
SSW	10365	NI-63	4.6E-08	8.3E-15	4.7E-15
SSW	10365	PU-238	2.0E-09	3.6E-16	2.0E-16
SSW	10365	PU-239	2.5E-09	4.6E-16	2.6E-16
SSW	10365	PU-240	2.5E-09	4.6E-16	2.6E-16
SSW	10472	AM-241	5.5E-10	9.9E-17	5.6E-17
SSW	10472	CO-60	2.9E-08	5.1E-15	2.9E-15
SSW	10472	CS-137	1.5E-06	2.6E-13	1.5E-13
SSW	10472	BA-137M	6.5E-11	1.2E-17	4.9E-18
SSW	10472	EU-154	7.8E-09	1.4E-15	8.0E-16
SSW	10472	NI-63	4.5E-08	8.1E-15	4.6E-15
SSW	10472	PU-238	2.0E-09	3.5E-16	2.0E-16
SSW	10472	PU-239	2.5E-09	4.5E-16	2.6E-16
SSW	10472	PU-240	2.5E-09	4.5E-16	2.6E-16
SSW	10590	AM-241	5.4E-10	9.7E-17	5.5E-17
SSW	10590	CO-60	2.8E-08	5.1E-15	2.9E-15
SSW	10590	CS-137	1.4E-06	2.6E-13	1.5E-13
SSW	10590	BA-137M	5.8E-11	1.0E-17	4.4E-18
SSW	10590	EU-154	7.7E-09	1.4E-15	7.9E-16
SSW	10590	NI-63	4.4E-08	8.0E-15	4.6E-15
SSW	10590	PU-238	1.9E-09	3.5E-16	2.0E-16
SSW	10590	PU-239	2.5E-09	4.4E-16	2.5E-16
SSW	10590	PU-240	2.5E-09	4.4E-16	2.5E-16
SSW	11103	AM-241	5.0E-10	9.1E-17	5.3E-17
SSW	11103	CO-60	2.6E-08	4.7E-15	2.8E-15
SSW	11103	CS-137	1.3E-06	2.4E-13	1.4E-13
SSW	11103	BA-137M	3.6E-11	6.4E-18	2.8E-18
SSW	11103	EU-154	7.2E-09	1.3E-15	7.6E-16
SSW	11103	NI-63	4.2E-08	7.5E-15	4.4E-15
SSW	11103	PU-238	1.8E-09	3.2E-16	1.9E-16
SSW	11103	PU-239	2.3E-09	4.1E-16	2.4E-16
SSW	11103	PU-240	2.3E-09	4.1E-16	2.4E-16
SSW	11989	AM-241	4.5E-10	8.1E-17	4.9E-17
SSW	11989	CO-60	2.3E-08	4.2E-15	2.5E-15
SSW	11989	CS-137	1.2E-06	2.2E-13	1.3E-13
SSW	11989	BA-137M	1.6E-11	2.8E-18	1.3E-18
SSW	11989	EU-154	6.4E-09	1.2E-15	7.0E-16
SSW	11989	NI-63	3.7E-08	6.7E-15	4.0E-15
SSW	11989	PU-238	1.6E-09	2.9E-16	1.7E-16
SSW	11989	PU-239	2.1E-09	3.7E-16	2.2E-16
SSW	11989	PU-240	2.1E-09	3.7E-16	2.2E-16
SSW	13245	AM-241	3.9E-10	7.0E-17	4.4E-17
SSW	13245	CO-60	2.0E-08	3.6E-15	2.3E-15

ESTIMATED RADIONUCLIDE CONCENTRATIONS
AT VARIOUS LOCATIONS IN THE ENVIRONMENT

Wind Toward	Distance (meters)	Nuclide	Dry	Wet	Ground
			Air Concentration (pCi/m3)	Deposition Rate (pCi/cm2/s)	Deposition Rate (pCi/cm2/s)
SSW	13245	CS-137	1.0E-06	1.9E-13	3.0E-13
SSW	13245	BA-137M	5.0E-12	9.0E-19	1.3E-18
SSW	13245	EU-154	5.6E-09	1.0E-15	1.6E-15
SSW	13245	NI-63	3.2E-08	5.8E-15	9.4E-15
SSW	13245	PU-238	1.4E-09	2.5E-16	4.1E-16
SSW	13245	PU-239	1.8E-09	3.2E-16	5.2E-16
SSW	13245	PU-240	1.8E-09	3.2E-16	5.2E-16
SSW	13286	AM-241	3.9E-10	7.0E-17	1.1E-16
SSW	13286	CO-60	2.0E-08	3.6E-15	5.9E-15
SSW	13286	CS-137	1.0E-06	1.9E-13	3.0E-13
SSW	13286	BA-137M	4.8E-12	8.7E-19	1.3E-18
SSW	13286	EU-154	5.5E-09	1.0E-15	1.6E-15
SSW	13286	NI-63	3.2E-08	5.8E-15	9.4E-15
SSW	13286	PU-238	1.4E-09	2.5E-16	4.1E-16
SSW	13286	PU-239	1.8E-09	3.2E-16	5.2E-16
SSW	13286	PU-240	1.8E-09	3.2E-16	5.2E-16
SSW	13483	AM-241	3.8E-10	6.8E-17	1.1E-16
SW	13483	CO-60	2.0E-08	3.6E-15	5.8E-15
SSW	13483	CS-137	1.0E-06	1.8E-13	3.0E-13
SSW	13483	BA-137M	4.0E-12	7.3E-19	1.1E-18
SSW	13483	EU-154	5.4E-09	9.8E-16	1.6E-15
SSW	13483	NI-63	3.1E-08	5.6E-15	9.2E-15
SSW	13483	PU-238	1.4E-09	2.4E-16	4.0E-16
SSW	13483	PU-239	1.7E-09	3.1E-16	5.1E-16
SSW	13483	PU-240	1.7E-09	3.1E-16	5.1E-16
SSW	13612	AM-241	3.7E-10	6.7E-17	1.1E-16
SSW	13612	CO-60	1.9E-08	3.5E-15	5.7E-15
SSW	13612	CS-137	1.0E-06	1.8E-13	2.9E-13
SSW	13612	BA-137M	3.6E-12	6.5E-19	9.7E-19
SSW	13612	EU-154	5.3E-09	9.6E-16	1.6E-15
SSW	13612	NI-63	3.1E-08	5.6E-15	9.1E-15
SSW	13612	PU-238	1.3E-09	2.4E-16	3.9E-16
SSW	13612	PU-239	1.7E-09	3.1E-16	5.0E-16
SSW	13612	PU-240	1.7E-09	3.1E-16	5.0E-16
SSW	13664	AM-241	3.7E-10	6.7E-17	1.1E-16
SSW	13664	CO-60	1.9E-08	3.5E-15	5.7E-15
SSW	13664	CS-137	9.9E-07	1.8E-13	2.9E-13
SSW	13664	BA-137M	3.4E-12	6.2E-19	9.3E-19
SSW	13664	EU-154	5.3E-09	9.6E-16	1.6E-15
SSW	13664	NI-63	3.1E-08	5.5E-15	9.0E-15
SSW	13664	PU-238	1.3E-09	2.4E-16	3.9E-16
SSW	13664	PU-239	1.7E-09	3.1E-16	5.0E-16
SSW	13664	PU-240	1.7E-09	3.1E-16	5.0E-16
SW	13959	AM-241	3.6E-10	6.5E-17	1.1E-16
SW	13959	CO-60	1.9E-08	3.4E-15	5.6E-15
SSW	13959	CS-137	9.6E-07	1.7E-13	2.8E-13
SSW	13959	BA-137M	2.6E-12	4.8E-19	7.2E-19

ESTIMATED RADIONUCLIDE CONCENTRATIONS
AT VARIOUS LOCATIONS IN THE ENVIRONMENT

Wind Toward	Distance (meters)	Nuclide	Dry	Wet	Ground
			Air Concentration (pCi/m ³)	Deposition Rate (pCi/cm ² /s)	Deposition Rate (pCi/cm ² /s)
SSW	13959	EU-154	5.2E-09	9.3E-16	1.5E-15
SSW	13959	NI-63	3.0E-08	5.4E-15	8.8E-15
SSW	13959	PU-238	1.3E-09	2.3E-16	3.8E-16
SSW	13959	PU-239	1.6E-09	3.0E-16	4.9E-16
SSW	13959	PU-240	1.6E-09	3.0E-16	4.9E-16
SSW	14258	AM-241	3.5E-10	6.3E-17	1.0E-16
SSW	14258	CO-60	1.8E-08	3.3E-15	5.4E-15
SSW	14258	CS-137	9.3E-07	1.7E-13	2.8E-13
SSW	14258	BA-137M	2.0E-12	3.7E-19	5.5E-19
SSW	14258	EU-154	5.0E-09	9.0E-16	1.5E-15
SSW	14258	NI-63	2.9E-08	5.2E-15	8.6E-15
SSW	14258	PU-238	1.2E-09	2.2E-16	3.7E-16
SSW	14258	PU-239	1.6E-09	2.9E-16	4.7E-16
SSW	14258	PU-240	1.6E-09	2.9E-16	4.7E-16
SSW	14374	AM-241	3.5E-10	6.2E-17	1.0E-16
SSW	14374	CO-60	1.8E-08	3.2E-15	5.4E-15
SSW	14374	CS-137	9.2E-07	1.7E-13	2.7E-13
SSW	14374	BA-137M	1.8E-12	3.3E-19	5.0E-19
SSW	14374	EU-154	4.9E-09	8.9E-16	1.5E-15
SSW	14374	NI-63	2.9E-08	5.1E-15	8.5E-15
SSW	14374	PU-238	1.2E-09	2.2E-16	3.7E-16
SSW	14374	PU-239	1.6E-09	2.8E-16	4.7E-16
SSW	14374	PU-240	1.6E-09	2.8E-16	4.7E-16
SSW	15241	AM-241	3.2E-10	5.7E-17	9.5E-17
SSW	15241	CO-60	1.7E-08	3.0E-15	5.0E-15
SSW	15241	CS-137	8.4E-07	1.5E-13	2.5E-13
SSW	15241	BA-137M	8.6E-13	1.5E-19	2.4E-19
SSW	15241	EU-154	4.5E-09	8.2E-16	1.4E-15
SSW	15241	NI-63	2.6E-08	4.7E-15	7.9E-15
SSW	15241	PU-238	1.1E-09	2.0E-16	3.4E-16
SSW	15241	PU-239	1.5E-09	2.6E-16	4.4E-16
SSW	15241	PU-240	1.5E-09	2.6E-16	4.4E-16
SSW	15441	AM-241	3.1E-10	5.6E-17	9.4E-17
SSW	15441	CO-60	1.6E-08	2.9E-15	4.9E-15
SSW	15441	CS-137	8.3E-07	1.5E-13	2.5E-13
SSW	15441	BA-137M	7.2E-13	1.3E-19	2.0E-19
SSW	15441	EU-154	4.4E-09	8.0E-16	1.3E-15
SSW	15441	NI-63	2.6E-08	4.6E-15	7.7E-15
SSW	15441	PU-238	1.1E-09	2.0E-16	3.3E-16
SSW	15441	PU-239	1.4E-09	2.6E-16	4.3E-16
SSW	15441	PU-240	1.4E-09	2.6E-16	4.3E-16
SSW	15784	AM-241	3.0E-10	5.4E-17	9.1E-17
SSW	15784	CO-60	1.6E-08	2.8E-15	4.7E-15
SSW	15784	CS-137	8.0E-07	1.4E-13	2.4E-13
SSW	15784	BA-137M	5.4E-13	9.7E-20	1.5E-19
SSW	15784	EU-154	4.3E-09	7.8E-16	1.3E-15
SSW	15784	NI-63	2.5E-08	4.5E-15	7.5E-15

ESTIMATED RADIONUCLIDE CONCENTRATIONS
AT VARIOUS LOCATIONS IN THE ENVIRONMENT

Wind Toward	Distance (meters)	Nuclide	Dry	Wet	Ground
			Air Concentration (pCi/m ³)	Deposition Rate (pCi/cm ² /s)	Deposition Rate (pCi/cm ² /s)
SSW	15784	PU-238	1.1E-09	1.9E-16	1.3E-16
SSW	15784	PU-239	1.4E-09	2.5E-16	1.7E-16
SSW	15784	PU-240	1.4E-09	2.5E-16	1.7E-16
SSW	15844	AM-241	3.0E-10	5.4E-17	3.7E-17
SSW	15844	CO-60	1.6E-08	2.8E-15	1.9E-15
SSW	15844	CS-137	8.0E-07	1.4E-13	9.1E-17
SSW	15844	BA-137M	5.1E-13	9.2E-20	5.0E-20
SSW	15844	EU-154	4.3E-09	7.7E-16	5.2E-16
SSW	15844	NI-63	2.5E-08	4.5E-15	3.0E-15
SSW	15844	PU-238	1.1E-09	1.9E-16	1.3E-16
SSW	15844	PU-239	1.4E-09	2.5E-16	1.7E-16
SSW	15844	PU-240	1.4E-09	2.5E-16	1.7E-16
SSW	16323	AM-241	2.9E-10	5.2E-17	3.6E-17
SSW	16323	CO-60	1.5E-08	2.7E-15	1.9E-15
SSW	16323	CS-137	7.6E-07	1.4E-13	9.5E-14
SSW	16323	BA-137M	3.4E-13	6.1E-20	3.4E-20
SSW	16323	EU-154	4.1E-09	7.4E-16	5.1E-16
SSW	16323	NI-63	2.4E-08	4.3E-15	2.9E-15
SSW	16323	PU-238	1.0E-09	1.8E-16	1.3E-16
SSW	16323	PU-239	1.3E-09	2.4E-16	1.6E-16
SSW	16323	PU-240	1.3E-09	2.4E-16	1.6E-16
SSW	17329	AM-241	2.6E-10	4.7E-17	3.3E-17
SSW	17329	CO-60	1.4E-08	2.5E-15	1.7E-15
SSW	17329	CS-137	7.0E-07	1.3E-13	8.9E-14
SSW	17329	BA-137M	1.4E-13	2.6E-20	1.5E-20
SSW	17329	EU-154	3.8E-09	6.8E-16	4.8E-16
SSW	17329	NI-63	2.2E-08	3.9E-15	2.8E-15
SSW	17329	PU-238	9.4E-10	1.7E-16	1.2E-16
SSW	17329	PU-239	1.2E-09	2.2E-16	1.5E-16
SSW	17329	PU-240	1.2E-09	2.2E-16	1.5E-16
S	10344	AM-241	9.8E-11	1.8E-17	1.3E-17
S	10344	CO-60	5.1E-09	9.2E-16	6.8E-16
S	10344	CS-137	2.6E-07	4.7E-14	3.5E-14
S	10344	BA-137M	6.5E-11	1.2E-17	3.9E-18
S	10344	EU-154	1.4E-09	2.5E-16	1.9E-16
S	10344	NI-63	8.1E-09	1.5E-15	1.1E-15
S	10344	PU-238	3.5E-10	6.3E-17	4.7E-17
S	10344	PU-239	4.5E-10	8.0E-17	6.0E-17
S	10344	PU-240	4.5E-10	8.0E-17	6.0E-17
S	10365	AM-241	9.7E-11	1.8E-17	1.3E-17
S	10365	CO-60	5.1E-09	9.1E-16	6.8E-16
S	10365	CS-137	2.6E-07	4.7E-14	3.5E-14
S	10365	BA-137M	6.4E-11	1.2E-17	3.8E-18
S	10365	EU-154	1.4E-09	2.5E-16	1.9E-16
S	10365	NI-63	8.0E-09	1.4E-15	1.1E-15
S	10365	PU-238	3.5E-10	6.3E-17	4.7E-17
S	10365	PU-239	4.5E-10	8.0E-17	6.0E-17

ESTIMATED RADIONUCLIDE CONCENTRATIONS
AT VARIOUS LOCATIONS IN THE ENVIRONMENT

Wind Toward	Distance (meters)	Nuclide	Dry	Wet	Ground
			Air Concentration (pCi/m ³)	Deposition Rate (pCi/cm ² /s)	Deposition Rate (pCi/cm ² /s)
S	10365	PU-240	4.5E-10	8.0E-17	1.4E-16
S	10472	AM-241	9.6E-11	1.7E-17	3.0E-17
S	10472	CO-60	5.0E-09	9.0E-16	1.6E-15
S	10472	CS-137	2.6E-07	4.6E-14	8.1E-14
S	10472	BA-137M	5.8E-11	1.0E-17	3.5E-18
S	10472	EU-154	1.4E-09	2.5E-16	1.9E-16
S	10472	NI-63	7.9E-09	1.4E-15	1.1E-15
S	10472	PU-238	3.4E-10	6.2E-17	4.6E-17
S	10472	PU-239	4.4E-10	7.9E-17	5.9E-17
S	10472	PU-240	4.4E-10	7.9E-17	5.9E-17
S	10590	AM-241	9.5E-11	1.7E-17	1.3E-17
S	10590	CO-60	4.9E-09	8.9E-16	6.7E-16
S	10590	CS-137	2.5E-07	4.5E-14	3.4E-14
S	10590	BA-137M	5.2E-11	9.4E-18	3.2E-18
S	10590	EU-154	1.4E-09	2.4E-16	1.8E-16
S	10590	NI-63	7.8E-09	1.4E-15	1.1E-15
S	10590	PU-238	3.4E-10	6.1E-17	4.6E-17
S	10590	PU-239	4.3E-10	7.8E-17	5.9E-17
S	10590	PU-240	4.3E-10	7.8E-17	5.9E-17
S	11103	AM-241	8.9E-11	1.6E-17	1.2E-17
S	11103	CO-60	4.6E-09	8.3E-16	6.4E-16
S	11103	CS-137	2.4E-07	4.2E-14	3.3E-14
S	11103	BA-137M	3.3E-11	6.0E-18	2.1E-18
S	11103	EU-154	1.3E-09	2.3E-16	1.7E-16
S	11103	NI-63	7.3E-09	1.3E-15	1.0E-15
S	11103	PU-238	3.2E-10	5.7E-17	4.4E-17
S	11103	PU-239	4.1E-10	7.3E-17	5.6E-17
S	11103	PU-240	4.1E-10	7.3E-17	5.6E-17
S	11989	AM-241	8.0E-11	1.4E-17	1.1E-17
S	11989	CO-60	4.2E-09	7.5E-16	5.9E-16
S	11989	CS-137	2.1E-07	3.8E-14	3.0E-14
S	11989	BA-137M	1.5E-11	2.8E-18	9.8E-19
S	11989	EU-154	1.1E-09	2.1E-16	1.6E-16
S	11989	NI-63	6.6E-09	1.2E-15	9.3E-16
S	11989	PU-238	2.9E-10	5.1E-17	4.0E-17
S	11989	PU-239	3.7E-10	6.6E-17	5.2E-17
S	11989	PU-240	3.7E-10	6.6E-17	5.2E-17
S	13245	AM-241	7.0E-11	1.3E-17	1.0E-17
S	13245	CO-60	3.6E-09	6.5E-16	5.3E-16
S	13245	CS-137	1.9E-07	3.3E-14	2.7E-14
S	13245	BA-137M	5.2E-12	9.4E-19	3.4E-19
S	13245	EU-154	1.0E-09	1.8E-16	1.5E-16
S	13245	NI-63	5.8E-09	1.0E-15	8.4E-16
S	13245	PU-238	2.5E-10	4.5E-17	3.6E-17
S	13245	PU-239	3.2E-10	5.7E-17	4.7E-17
S	13245	PU-240	3.2E-10	5.7E-17	4.7E-17
S	13286	AM-241	7.0E-11	1.3E-17	1.0E-17
					2.3E-17

ESTIMATED RADIONUCLIDE CONCENTRATIONS
AT VARIOUS LOCATIONS IN THE ENVIRONMENT

Wind Toward	Distance (meters)	Nuclide	Dry	Wet	Ground
			Air Concentration (pCi/m ³)	Deposition Rate (pCi/cm ² /s)	Deposition Rate (pCi/cm ² /s)
S	13286	CO-60	3.6E-09	6.5E-16	5.3E-16
S	13286	CS-137	1.8E-07	3.3E-14	2.7E-14
S	13286	BA-137M	5.0E-12	9.1E-19	3.3E-19
S	13286	EU-154	9.9E-10	1.8E-16	1.5E-16
S	13286	NI-63	5.7E-09	1.0E-15	8.4E-16
S	13286	PU-238	2.5E-10	4.5E-17	3.6E-17
S	13286	PU-239	3.2E-10	5.7E-17	4.6E-17
S	13286	PU-240	3.2E-10	5.7E-17	4.6E-17
S	13483	AM-241	6.8E-11	1.2E-17	1.0E-17
S	13483	CO-60	3.6E-09	6.4E-16	5.2E-16
S	13483	CS-137	1.8E-07	3.3E-14	2.7E-14
S	13483	BA-137M	4.3E-12	7.7E-19	2.8E-19
S	13483	EU-154	9.7E-10	1.8E-16	1.4E-16
S	13483	NI-63	5.6E-09	1.0E-15	8.3E-16
S	13483	PU-238	2.4E-10	4.4E-17	3.6E-17
S	13483	PU-239	3.1E-10	5.6E-17	4.6E-17
S	13483	PU-240	3.1E-10	5.6E-17	4.6E-17
S	13612	AM-241	6.7E-11	1.2E-17	9.9E-18
S	13612	CO-60	3.5E-09	6.3E-16	5.2E-16
S	13612	CS-137	1.8E-07	3.2E-14	2.6E-14
S	13612	BA-137M	3.8E-12	6.9E-19	2.5E-19
S	13612	EU-154	9.6E-10	1.7E-16	1.4E-16
S	13612	NI-63	5.6E-09	1.0E-15	8.2E-16
S	13612	PU-238	2.4E-10	4.3E-17	3.5E-17
S	13612	PU-239	3.1E-10	5.5E-17	4.5E-17
S	13612	PU-240	3.1E-10	5.5E-17	4.5E-17
S	13664	AM-241	6.7E-11	1.2E-17	9.9E-18
S	13664	CO-60	3.5E-09	6.3E-16	5.1E-16
S	13664	CS-137	1.8E-07	3.2E-14	2.6E-14
S	13664	BA-137M	3.6E-12	6.6E-19	2.4E-19
S	13664	EU-154	9.6E-10	1.7E-16	1.4E-16
S	13664	NI-63	5.5E-09	9.9E-16	8.1E-16
S	13664	PU-238	2.4E-10	4.3E-17	3.5E-17
S	13664	PU-239	3.1E-10	5.5E-17	4.5E-17
S	13664	PU-240	3.1E-10	5.5E-17	4.5E-17
S	13959	AM-241	6.5E-11	1.2E-17	9.7E-18
S	13959	CO-60	3.4E-09	6.1E-16	5.0E-16
S	13959	CS-137	1.7E-07	3.1E-14	2.6E-14
S	13959	BA-137M	2.8E-12	5.1E-19	1.9E-19
S	13959	EU-154	9.3E-10	1.7E-16	1.4E-16
S	13959	NI-63	5.4E-09	9.7E-16	8.0E-16
S	13959	PU-238	2.3E-10	4.2E-17	3.4E-17
S	13959	PU-239	3.0E-10	5.3E-17	4.4E-17
S	13959	PU-240	3.0E-10	5.3E-17	4.4E-17
S	14258	AM-241	6.3E-11	1.1E-17	9.4E-18
S	14258	CO-60	3.3E-09	5.9E-16	4.9E-16
S	14258	CS-137	1.7E-07	3.0E-14	2.5E-14

ESTIMATED RADIONUCLIDE CONCENTRATIONS
AT VARIOUS LOCATIONS IN THE ENVIRONMENT

Wind Toward	Distance (meters)	Nuclide	Dry	Wet	Ground
			Air Concentration (pCi/m ³)	Deposition Rate (pCi/cm ² /s)	Deposition Rate (pCi/cm ² /s)
S	14258	BA-137M	2.2E-12	4.0E-19	5.5E-19
S	14258	EU-154	9.0E-10	1.6E-16	3.0E-16
S	14258	NI-63	5.2E-09	9.4E-16	1.7E-15
S	14258	PU-238	2.3E-10	4.1E-17	7.4E-17
S	14258	PU-239	2.9E-10	5.2E-17	4.3E-17
S	14258	PU-240	2.9E-10	5.2E-17	4.3E-17
S	14374	AM-241	6.2E-11	1.1E-17	9.4E-18
S	14374	CO-60	3.3E-09	5.9E-16	4.9E-16
S	14374	CS-137	1.7E-07	3.0E-14	2.5E-14
S	14374	BA-137M	2.0E-12	3.6E-19	1.4E-19
S	14374	EU-154	8.9E-10	1.6E-16	1.3E-16
S	14374	NI-63	5.2E-09	9.3E-16	7.7E-16
S	14374	PU-238	2.2E-10	4.0E-17	3.3E-17
S	14374	PU-239	2.9E-10	5.1E-17	4.3E-17
S	14374	PU-240	2.9E-10	5.1E-17	4.3E-17
S	15241	AM-241	5.8E-11	1.0E-17	8.8E-18
S	15241	CO-60	3.0E-09	5.4E-16	4.6E-16
S	15241	CS-137	1.5E-07	2.8E-14	2.3E-14
S	15241	BA-137M	9.6E-13	1.7E-19	6.7E-20
S	15241	EU-154	8.2E-10	1.5E-16	1.3E-16
S	15241	NI-63	4.8E-09	8.6E-16	7.3E-16
S	15241	PU-238	2.1E-10	3.7E-17	3.1E-17
S	15241	PU-239	2.6E-10	4.7E-17	4.0E-17
S	15241	PU-240	2.6E-10	4.7E-17	4.0E-17
S	15441	AM-241	5.7E-11	1.0E-17	8.7E-18
S	15441	CO-60	3.0E-09	5.3E-16	4.5E-16
S	15441	CS-137	1.5E-07	2.7E-14	2.3E-14
S	15441	BA-137M	8.1E-13	1.5E-19	5.7E-20
S	15441	EU-154	8.1E-10	1.5E-16	1.2E-16
S	15441	NI-63	4.7E-09	8.4E-16	7.2E-16
S	15441	PU-238	2.0E-10	3.6E-17	3.1E-17
S	15441	PU-239	2.6E-10	4.7E-17	4.0E-17
S	15441	PU-240	2.6E-10	4.7E-17	4.0E-17
S	15784	AM-241	5.5E-11	9.9E-18	8.5E-18
S	15784	CO-60	2.9E-09	5.2E-16	4.4E-16
S	15784	CS-137	1.5E-07	2.6E-14	2.3E-14
S	15784	BA-137M	6.1E-13	1.1E-19	4.3E-20
S	15784	EU-154	7.9E-10	1.4E-16	1.2E-16
S	15784	NI-63	4.5E-09	8.2E-16	7.0E-16
S	15784	PU-238	2.0E-10	3.5E-17	3.0E-17
S	15784	PU-239	2.5E-10	4.5E-17	3.9E-17
S	15784	PU-240	2.5E-10	4.5E-17	3.9E-17
S	15844	AM-241	5.5E-11	9.9E-18	8.5E-18
S	15844	CO-60	2.9E-09	5.1E-16	4.4E-16
S	15844	CS-137	1.5E-07	2.6E-14	2.3E-14
S	15844	BA-137M	5.8E-13	1.0E-19	4.1E-20
S	15844	EU-154	7.8E-10	1.4E-16	1.2E-16

ESTIMATED RADIONUCLIDE CONCENTRATIONS
AT VARIOUS LOCATIONS IN THE ENVIRONMENT

Wind Toward	Distance (meters)	Nuclide	Dry	Wet	Ground
			Air Concentration (pCi/m ³)	Deposition Rate (pCi/cm ² /s)	Deposition Rate (pCi/cm ² /s)
S	15844	NI-63	4.5E-09	8.1E-16	7.0E-16
S	15844	PU-238	2.0E-10	3.5E-17	3.0E-17
S	15844	PU-239	2.5E-10	4.5E-17	3.9E-17
S	15844	PU-240	2.5E-10	4.5E-17	3.9E-17
S	16323	AM-241	5.3E-11	9.5E-18	8.2E-18
S	16323	CO-60	2.7E-09	4.9E-16	4.3E-16
S	16323	CS-137	1.4E-07	2.5E-14	2.2E-14
S	16323	BA-137M	3.9E-13	7.0E-20	2.8E-20
S	16323	EU-154	7.5E-10	1.4E-16	1.2E-16
S	16323	NI-63	4.3E-09	7.8E-16	6.8E-16
S	16323	PU-238	1.9E-10	3.4E-17	2.9E-17
S	16323	PU-239	2.4E-10	4.3E-17	3.8E-17
S	16323	PU-240	2.4E-10	4.3E-17	3.8E-17
S	17329	AM-241	4.9E-11	8.7E-18	7.7E-18
S	17329	CO-60	2.5E-09	4.6E-16	4.0E-16
S	17329	CS-137	1.3E-07	2.3E-14	2.1E-14
S	17329	BA-137M	1.7E-13	3.0E-20	1.2E-20
S	17329	EU-154	6.9E-10	1.2E-16	1.1E-16
S	17329	NI-63	4.0E-09	7.2E-16	6.4E-16
S	17329	PU-238	1.7E-10	3.1E-17	2.8E-17
S	17329	PU-239	2.2E-10	4.0E-17	3.5E-17
S	17329	PU-240	2.2E-10	4.0E-17	3.5E-17
SSE	10344	AM-241	3.1E-10	5.7E-17	3.1E-17
SSE	10344	CO-60	1.6E-08	3.0E-15	1.6E-15
SSE	10344	CS-137	8.4E-07	1.5E-13	8.2E-14
SSE	10344	BA-137M	1.9E-09	3.4E-16	8.4E-17
SSE	10344	EU-154	4.5E-09	8.1E-16	4.4E-16
SSE	10344	NI-63	2.6E-08	4.7E-15	2.6E-15
SSE	10344	PU-238	1.1E-09	2.0E-16	1.1E-16
SSE	10344	PU-239	1.4E-09	2.6E-16	1.4E-16
SSE	10344	PU-240	1.4E-09	2.6E-16	1.4E-16
SSE	10365	AM-241	3.1E-10	5.6E-17	3.1E-17
SSE	10365	CO-60	1.6E-08	2.9E-15	1.6E-15
SSE	10365	CS-137	8.3E-07	1.5E-13	8.2E-14
SSE	10365	BA-137M	1.9E-09	3.4E-16	8.3E-17
SSE	10365	EU-154	4.5E-09	8.1E-16	4.4E-16
SSE	10365	NI-63	2.6E-08	4.7E-15	2.5E-15
SSE	10365	PU-238	1.1E-09	2.0E-16	1.1E-16
SSE	10365	PU-239	1.4E-09	2.6E-16	1.4E-16
SSE	10365	PU-240	1.4E-09	2.6E-16	1.4E-16
SSE	10472	AM-241	3.1E-10	5.6E-17	3.1E-17
SSE	10472	CO-60	1.6E-08	2.9E-15	1.6E-15
SSE	10472	CS-137	8.2E-07	1.5E-13	8.1E-14
SE	10472	BA-137M	1.7E-09	3.1E-16	7.7E-17
SE	10472	EU-154	4.4E-09	8.0E-16	4.4E-16
SSE	10472	NI-63	2.6E-08	4.6E-15	2.5E-15
SSE	10472	PU-238	1.1E-09	2.0E-16	1.1E-16

ESTIMATED RADIONUCLIDE CONCENTRATIONS
AT VARIOUS LOCATIONS IN THE ENVIRONMENT

Wind Toward	Distance (meters)	Nuclide	Dry	Wet	Ground
			Air Concentration (pCi/m ³)	Deposition Rate (pCi/cm ² /s)	Deposition Rate (pCi/cm ² /s)
SSE	10472	PU-239	1.4E-09	2.5E-16	1.4E-16
SSE	10472	PU-240	1.4E-09	2.5E-16	1.4E-16
SSE	10590	AM-241	3.0E-10	5.5E-17	3.0E-17
SSE	10590	CO-60	1.6E-08	2.9E-15	1.6E-15
SSE	10590	CS-137	8.1E-07	1.5E-13	8.0E-14
SSE	10590	BA-137M	1.6E-09	2.9E-16	7.1E-17
SSE	10590	EU-154	4.3E-09	7.8E-16	4.3E-16
SSE	10590	NI-63	2.5E-08	4.5E-15	2.5E-15
SSE	10590	PJ-238	1.1E-09	2.0E-16	1.1E-16
SSE	10590	PU-239	1.4E-09	2.5E-16	1.4E-16
SSE	10590	PU-240	1.4E-09	2.5E-16	1.4E-16
SSE	11103	AM-241	2.8E-10	5.1E-17	2.9E-17
SSE	11103	CO-60	1.5E-08	2.7E-15	1.5E-15
SSE	11103	CS-137	7.6E-07	1.4E-13	7.7E-14
SSE	11103	BA-137M	1.1E-09	2.0E-16	5.1E-17
SSE	11103	EU-154	4.1E-09	7.3E-16	4.1E-16
SSE	11103	NI-63	2.3E-08	4.2E-15	2.4E-15
SSE	11103	PU-238	1.0E-09	1.8E-16	1.0E-16
SSE	11103	PU-239	1.3E-09	2.3E-16	1.3E-16
SSE	11103	PU-240	1.3E-09	2.3E-16	1.3E-16
SSE	11989	AM-241	2.5E-10	4.6E-17	2.7E-17
SSE	11989	CO-60	1.3E-08	2.4E-15	1.4E-15
SSE	11989	CS-137	6.8E-07	1.2E-13	7.1E-14
SSE	11989	BA-137M	6.1E-10	1.1E-16	2.9E-17
SSE	11989	EU-154	3.6E-09	6.5E-16	3.8E-16
SSE	11989	NI-63	2.1E-08	3.8E-15	2.2E-15
SSE	11989	PU-238	9.1E-10	1.6E-16	9.5E-17
SSE	11989	PU-239	1.2E-09	2.1E-16	1.2E-16
SSE	11989	PU-240	1.2E-09	2.1E-16	1.2E-16
SSE	13245	AM-241	2.2E-10	4.0E-17	2.4E-17
SSE	13245	CO-60	1.2E-08	2.1E-15	1.3E-15
SSE	13245	CS-137	5.9E-07	1.1E-13	6.4E-14
SSE	13245	BA-137M	2.6E-10	4.8E-17	1.3E-17
SSE	13245	EU-154	3.2E-09	5.7E-16	3.4E-16
SSE	13245	NI-63	1.8E-08	3.3E-15	2.0E-15
SSE	13245	PU-238	7.9E-10	1.4E-16	8.6E-17
SSE	13245	PU-239	1.0E-09	1.8E-16	1.1E-16
SSE	13245	PU-240	1.0E-09	1.8E-16	1.1E-16
SSE	13286	AM-241	2.2E-10	4.0E-17	2.4E-17
SSE	13286	CO-60	1.1E-08	2.1E-15	1.2E-15
SSE	13286	CS-137	5.8E-07	1.1E-13	6.4E-14
SSE	13286	BA-137M	2.6E-10	4.6E-17	1.3E-17
SSE	13286	EU-154	3.1E-09	5.7E-16	3.4E-16
SSE	13286	NI-63	1.8E-08	3.3E-15	2.0E-15
SSE	13286	PU-238	7.8E-10	1.4E-16	8.5E-17
SSE	13286	PU-239	1.0E-09	1.8E-16	1.1E-16
SSE	13286	PU-240	1.0E-09	1.8E-16	1.1E-16

ESTIMATED RADIONUCLIDE CONCENTRATIONS
AT VARIOUS LOCATIONS IN THE ENVIRONMENT

Wind Toward	Distance (meters)	Nuclide	Dry	Wet	Ground
			Air Concentration (pCi/m ³)	Deposition Rate (pCi/cm ² /s)	Deposition Rate (pCi/cm ² /s)
SSE	13483	AM-241	2.2E-10	3.9E-17	2.4E-17
SSE	13483	CO-60	1.1E-08	2.0E-15	1.2E-15
SSE	13483	CS-137	5.7E-07	1.0E-13	6.3E-14
SSE	13483	BA-137M	2.3E-10	4.1E-17	1.1E-17
SSE	13483	EU-154	3.1E-09	5.5E-16	3.4E-16
SSE	13483	NI-63	1.8E-08	3.2E-15	1.9E-15
SSE	13483	PU-238	7.7E-10	1.4E-16	8.4E-17
SSE	13483	PU-239	9.8E-10	1.8E-16	1.1E-16
SSE	13483	PU-240	9.8E-10	1.8E-16	1.1E-16
SSE	13612	AM-241	2.1E-10	3.8E-17	2.3E-17
SSE	13612	CO-60	1.1E-08	2.0E-15	1.2E-15
SSE	13612	CS-137	5.6E-07	1.0E-13	6.2E-14
SSE	13612	BA-137M	2.1E-10	3.7E-17	1.0E-17
SSE	13612	EU-154	3.0E-09	5.5E-16	3.3E-16
SSE	13612	NI-63	1.8E-08	3.2E-15	1.9E-15
SSE	13612	PU-238	7.6E-10	1.4E-16	8.3E-17
SSE	13612	PU-239	9.7E-10	1.7E-16	1.1E-16
SE	13612	PU-240	9.7E-10	1.7E-16	1.1E-16
SSE	13664	AM-241	2.1E-10	3.8E-17	2.3E-17
SSE	13664	CO-60	1.1E-08	2.0E-15	1.2E-15
SSE	13664	CS-137	5.6E-07	1.0E-13	6.2E-14
SSE	13664	BA-137M	2.0E-10	3.6E-17	1.0E-17
SSE	13664	EU-154	3.0E-09	5.4E-16	3.3E-16
SSE	13664	NI-63	1.7E-08	3.1E-15	1.9E-15
SSE	13664	PU-238	7.5E-10	1.4E-16	8.3E-17
SSE	13664	PU-239	9.7E-10	1.7E-16	1.1E-16
SSE	13664	PU-240	9.7E-10	1.7E-16	1.1E-16
SSE	13959	AM-241	2.0E-10	3.7E-17	2.3E-17
SSE	13959	CO-60	1.1E-08	1.9E-15	1.2E-15
SSE	13959	CS-137	5.4E-07	9.8E-14	6.1E-14
SSE	13959	BA-137M	1.6E-10	3.0E-17	8.4E-18
SSE	13959	EU-154	2.9E-09	5.3E-16	3.3E-16
SSE	13959	NI-63	1.7E-08	3.0E-15	1.9E-15
SSE	13959	PU-238	7.3E-10	1.3E-16	8.1E-17
SSE	13959	PU-239	9.4E-10	1.7E-16	1.0E-16
SSE	13959	PU-240	9.4E-10	1.7E-16	1.0E-16
SSE	14258	AM-241	2.0E-10	3.6E-17	2.2E-17
SSE	14258	CO-60	1.0E-08	1.9E-15	1.2E-15
SSE	14258	CS-137	5.3E-07	9.5E-14	5.9E-14
SSE	14258	BA-137M	1.4E-10	2.4E-17	7.0E-18
SSE	14258	EU-154	2.8E-09	5.1E-16	3.2E-16
SSE	14258	NI-63	1.6E-08	3.0E-15	1.8E-15
SSE	14258	PU-238	7.1E-10	1.3E-16	8.0E-17
SSE	14258	PU-239	9.1E-10	1.6E-16	1.0E-16
SSE	14258	PU-240	9.1E-10	1.6E-16	1.0E-16
SSE	14374	AM-241	2.0E-10	3.5E-17	2.2E-17
SSE	14374	CO-60	1.0E-08	1.8E-15	1.2E-15

ESTIMATED RADIONUCLIDE CONCENTRATIONS
AT VARIOUS LOCATIONS IN THE ENVIRONMENT

Wind Toward	Distance (meters)	Nuclide	Dry	Wet	Ground
			Air Concentration (pCi/m ³)	Deposition Rate (pCi/cm ² /s)	Deposition Rate (pCi/cm ² /s)
SSE	14374	CS-137	5.2E-07	9.4E-14	5.9E-14
SSE	14374	BA-137M	1.3E-10	2.3E-17	6.5E-18
SSE	14374	EU-154	2.8E-09	5.1E-16	3.2E-16
SSE	14374	NI-63	1.6E-08	2.9E-15	1.8E-15
SSE	14374	PU-238	7.0E-10	1.3E-16	7.9E-17
SSE	14374	PU-239	9.0E-10	1.6E-16	1.0E-16
SSE	14374	PU-240	9.0E-10	1.6E-16	1.0E-16
SSE	15241	AM-241	1.8E-10	3.3E-17	2.1E-17
SSE	15241	CO-60	9.4E-09	1.7E-15	1.1E-15
SSE	15241	CS-137	4.8E-07	8.7E-14	5.5E-14
SSE	15241	BA-137M	7.1E-11	1.3E-17	3.8E-18
SSE	15241	EU-154	2.6E-09	4.6E-16	3.0E-16
SSE	15241	NI-63	1.5E-08	2.7E-15	1.7E-15
SSE	15241	PU-238	6.4E-10	1.2E-16	7.4E-17
SSE	15241	PU-239	8.3E-10	1.5E-16	9.5E-17
SSE	15241	PU-240	8.3E-10	1.5E-16	9.5E-17
SSE	15441	AM-241	1.8E-10	3.2E-17	2.1E-17
SSE	15441	CO-60	9.2E-09	1.7E-15	1.1E-15
SSE	15441	CS-137	4.7E-07	8.5E-14	5.5E-14
SSE	15441	BA-137M	6.3E-11	1.1E-17	3.4E-18
SSE	15441	EU-154	2.5E-09	4.6E-16	2.9E-16
SSE	15441	NI-63	1.5E-08	2.6E-15	1.7E-15
SSE	15441	PU-238	6.3E-10	1.1E-16	7.3E-17
SSE	15441	PU-239	8.1E-10	1.5E-16	9.4E-17
SSE	15441	PU-240	8.1E-10	1.5E-16	9.4E-17
SSE	15784	AM-241	1.7E-10	3.1E-17	2.0E-17
SSE	15784	CO-60	9.0E-09	1.6E-15	1.0E-15
SSE	15784	CS-137	4.6E-07	8.2E-14	5.3E-14
SSE	15784	BA-137M	5.0E-11	9.0E-18	2.7E-18
SSE	15784	EU-154	2.5E-09	4.4E-16	2.9E-16
SSE	15784	NI-63	1.4E-08	2.6E-15	1.7E-15
SSE	15784	PU-238	6.1E-10	1.1E-16	7.2E-17
SSE	15784	PU-239	7.9E-10	1.4E-16	9.2E-17
SSE	15784	PU-240	7.9E-10	1.4E-16	9.2E-17
SSE	15844	AM-241	1.7E-10	3.1E-17	2.0E-17
SSE	15844	CO-60	8.9E-09	1.6E-15	1.0E-15
SSE	15844	CS-137	4.5E-07	8.2E-14	5.3E-14
SSE	15844	BA-137M	4.8E-11	8.7E-18	2.6E-18
SSE	15844	EU-154	2.4E-09	4.4E-16	2.9E-16
SSE	15844	NI-63	1.4E-08	2.5E-15	1.6E-15
SSE	15844	PU-238	6.1E-10	1.1E-16	7.1E-17
SSE	15844	PU-239	7.8E-10	1.4E-16	9.1E-17
SSE	15844	PU-240	7.8E-10	1.4E-16	9.1E-17
SSE	16323	AM-241	1.6E-10	2.9E-17	1.9E-17
SSE	16323	CO-60	8.5E-09	1.5E-15	1.0E-15
SSE	16323	CS-137	4.4E-07	7.8E-14	5.2E-14
SSE	16323	BA-137M	3.5E-11	6.4E-18	2.0E-18
					8.3E-18

ESTIMATED RADIONUCLIDE CONCENTRATIONS
AT VARIOUS LOCATIONS IN THE ENVIRONMENT

Wind Toward	Distance (meters)	Nuclide	Dry	Air	Deposition	Wet	Ground
			Concentration (pCi/m ³)	Rate (pCi/cm ² /s)	Deposition (pCi/cm ² /s)	Rate (pCi/cm ² /s)	Deposition (pCi/cm ² /s)
SSE	16323	EU-154	2.3E-09	4.2E-16	2.8E-16	7.0E-16	
SSE	16323	NI-63	1.4E-08	2.4E-15	1.6E-15	4.0E-15	
SSE	16323	PU-238	5.8E-10	1.1E-16	6.9E-17	1.7E-16	
SSE	16323	PU-239	7.5E-10	1.3E-16	8.9E-17	2.2E-16	
SSE	16323	PU-240	7.5E-10	1.3E-16	8.9E-17	2.2E-16	
SSE	17329	AM-241	1.5E-10	2.7E-17	1.8E-17	4.5E-17	
SSE	17329	CO-60	7.8E-09	1.4E-15	9.5E-16	2.4E-15	
SSE	17329	CS-137	4.0E-07	7.2E-14	4.8E-14	1.2E-13	
SSE	17329	BA-137M	1.9E-11	3.4E-18	1.1E-18	4.4E-18	
SSE	17329	EU-154	2.1E-09	3.9E-16	2.6E-16	6.5E-16	
SSE	17329	NI-63	1.2E-08	2.2E-15	1.5E-15	3.7E-15	
SSE	17329	PU-238	5.4E-10	9.7E-17	6.5E-17	1.6E-16	
SSE	17329	PU-239	6.9E-10	1.2E-16	8.3E-17	2.1E-16	
SSE	17329	PU-240	6.9E-10	1.2E-16	8.3E-17	2.1E-16	
SE	10344	AM-241	7.4E-11	1.3E-17	1.0E-17	2.4E-17	
SE	10344	CO-60	3.9E-09	7.0E-16	5.3E-16	1.2E-15	
SE	10344	CS-137	2.0E-07	3.6E-14	2.7E-14	6.3E-14	
SE	10344	BA-137M	1.5E-10	2.6E-17	7.0E-18	3.3E-17	
SE	10344	EU-154	1.1E-09	1.9E-16	1.5E-16	3.4E-16	
SE	10344	NI-63	6.1E-09	1.1E-15	8.4E-16	1.9E-15	
SE	10344	PU-238	2.7E-10	4.8E-17	3.6E-17	8.4E-17	
SE	10344	PU-239	3.4E-10	6.1E-17	4.6E-17	1.1E-16	
SE	10344	PU-240	3.4E-10	6.1E-17	4.6E-17	1.1E-16	
SE	10365	AM-241	7.4E-11	1.3E-17	1.0E-17	2.3E-17	
SE	10365	CO-60	3.9E-09	7.0E-16	5.3E-16	1.2E-15	
SE	10365	CS-137	2.0E-07	3.6E-14	2.7E-14	6.2E-14	
SE	10365	BA-137M	1.4E-10	2.6E-17	6.9E-18	3.3E-17	
SE	10365	EU-154	1.1E-09	1.9E-16	1.4E-16	3.4E-16	
SE	10365	NI-63	6.1E-09	1.1E-15	8.4E-16	1.9E-15	
SE	10365	PU-238	2.6E-10	4.8E-17	3.6E-17	8.4E-17	
SE	10365	PU-239	3.4E-10	6.1E-17	4.6E-17	1.1E-16	
SE	10365	PU-240	3.4E-10	6.1E-17	4.6E-17	1.1E-16	
SE	10472	AM-241	7.3E-11	1.3E-17	1.0E-17	2.3E-17	
SE	10472	CO-60	3.8E-09	6.9E-16	5.2E-16	1.2E-15	
SE	10472	CS-137	1.9E-07	3.5E-14	2.7E-14	6.2E-14	
SE	10472	BA-137M	1.3E-10	2.4E-17	6.4E-18	3.0E-17	
SE	10472	EU-154	1.0E-09	1.9E-16	1.4E-16	3.3E-16	
SE	10472	NI-63	6.0E-09	1.1E-15	8.3E-16	1.9E-15	
SE	10472	PU-238	2.6E-10	4.7E-17	3.6E-17	8.3E-17	
SE	10472	PU-239	3.3E-10	6.0E-17	4.6E-17	1.1E-16	
SE	10472	PU-240	3.3E-10	6.0E-17	4.6E-17	1.1E-16	
SE	10590	AM-241	7.2E-11	1.3E-17	9.9E-18	2.3E-17	
SE	10590	CO-60	3.8E-09	6.8E-16	5.2E-16	1.2E-15	
SE	10590	CS-137	1.9E-07	3.5E-14	2.6E-14	6.1E-14	
SE	10590	BA-137M	1.2E-10	2.2E-17	5.9E-18	2.7E-17	
SE	10590	EU-154	1.0E-09	1.9E-16	1.4E-16	3.3E-16	
SE	10590	NI-63	5.9E-09	1.1E-15	8.2E-16	1.9E-15	

ESTIMATED RADIONUCLIDE CONCENTRATIONS
AT VARIOUS LOCATIONS IN THE ENVIRONMENT

Wind Toward	Distance (meters)	Nuclide	Dry	Wet	Ground
			Air Concentration (pCi/m ³)	Deposition Rate (pCi/cm ² /s)	Deposition Rate (pCi/cm ² /s)
SE	10590	PU-238	2.6E-10	4.6E-17	3.5E-17
SE	10590	PU-239	3.3E-10	5.9E-17	4.5E-17
SE	10590	PU-240	3.3E-10	5.9E-17	4.5E-17
SE	11103	AM-241	6.8E-11	1.2E-17	9.4E-18
SE	11103	CO-60	3.5E-09	6.3E-16	4.9E-16
SE	11103	CS-137	1.8E-07	3.2E-14	2.5E-14
SE	11103	BA-137M	8.1E-11	1.5E-17	4.0E-18
SE	11103	EU-154	9.7E-10	1.7E-16	1.3E-16
SE	11103	NI-63	5.6E-09	1.0E-15	7.8E-16
SE	11103	PU-238	2.4E-10	4.3E-17	3.4E-17
SE	11103	PU-239	3.1E-10	5.6E-17	4.3E-17
SE	11103	PU-240	3.1E-10	5.6E-17	4.3E-17
SE	11989	AM-241	6.1E-11	1.1E-17	8.7E-18
SE	11989	CO-60	3.2E-09	5.7E-16	4.5E-16
SE	11989	CS-137	1.6E-07	2.9E-14	2.3E-14
SE	11989	BA-137M	4.1E-11	7.4E-18	2.1E-18
SE	11989	EU-154	8.7E-10	1.6E-16	1.2E-16
SE	11989	NI-63	5.0E-09	9.1E-16	7.2E-16
SE	11989	PU-238	2.2E-10	3.9E-17	3.1E-17
SE	11989	PU-239	2.8E-10	5.0E-17	4.0E-17
SE	11989	PU-240	2.8E-10	5.0E-17	4.0E-17
SE	13245	AM-241	5.4E-11	9.6E-18	7.9E-18
SE	13245	CO-60	2.8E-09	5.0E-16	4.1E-16
SE	13245	CS-137	1.4E-07	2.6E-14	2.1E-14
SE	13245	BA-137M	1.6E-11	2.9E-18	8.4E-19
SE	13245	EU-154	7.7E-10	1.4E-16	1.1E-16
SE	13245	NI-63	4.4E-09	8.0E-16	6.5E-16
SE	13245	PU-238	1.9E-10	3.4E-17	2.8E-17
SE	13245	PU-239	2.4E-10	4.4E-17	3.6E-17
SE	13245	PU-240	2.4E-10	4.4E-17	3.6E-17
SE	13286	AM-241	5.3E-11	9.6E-18	7.9E-18
SE	13286	CO-60	2.8E-09	5.0E-16	4.1E-16
SE	13286	CS-137	1.4E-07	2.6E-14	2.1E-14
SE	13286	BA-137M	1.5E-11	2.8E-18	8.2E-19
SE	13286	EU-154	7.6E-10	1.4E-16	1.1E-16
SE	13286	NI-63	4.4E-09	7.9E-16	6.5E-16
SE	13286	PU-238	1.9E-10	3.4E-17	2.8E-17
SE	13286	PU-239	2.4E-10	4.4E-17	3.6E-17
SE	13286	PU-240	2.4E-10	4.4E-17	3.6E-17
SE	13483	AM-241	5.2E-11	9.4E-18	7.7E-18
SE	13483	CO-60	2.7E-09	4.9E-16	4.0E-16
SE	13483	CS-137	1.4E-07	2.5E-14	2.1E-14
SE	13483	BA-137M	1.3E-11	2.4E-18	7.1E-19
SE	13483	EU-154	7.5E-10	1.3E-16	1.1E-16
SE	13483	NI-63	4.3E-09	7.8E-16	6.4E-16
SE	13483	PU-238	1.9E-10	3.4E-17	2.8E-17
SE	13483	PU-239	2.4E-10	4.3E-17	3.5E-17

ESTIMATED RADIONUCLIDE CONCENTRATIONS
AT VARIOUS LOCATIONS IN THE ENVIRONMENT

Wind Toward	Distance (meters)	Nuclide	Dry	Wet	Ground
			Air Concentration (pCi/m ³)	Deposition Rate (pCi/cm ² /s)	Deposition Rate (pCi/cm ² /s)
SE	13483	PU-240	2.4E-10	4.3E-17	3.5E-17
SE	13612	AM-241	5.2E-11	9.3E-18	7.7E-18
SE	13612	CO-60	2.7E-09	4.8E-16	4.0E-16
SE	13612	CS-137	1.4E-07	2.5E-14	2.0E-14
SE	13612	BA-137M	1.2E-11	2.2E-18	6.5E-19
SE	13612	EU-154	7.4E-10	1.3E-16	1.1E-16
SE	13612	NI-63	4.3E-09	7.7E-16	6.3E-16
SE	13612	PU-238	1.8E-10	3.3E-17	2.7E-17
SE	13612	PU-239	2.4E-10	4.3E-17	3.5E-17
SE	13612	PU-240	2.4E-10	4.3E-17	3.5E-17
SE	13664	AM-241	5.1E-11	9.3E-18	7.6E-18
SE	13664	CO-60	2.7E-09	4.8E-16	4.0E-16
SE	13664	CS-137	1.4E-07	2.5E-14	2.0E-14
SE	13664	BA-137M	1.2E-11	2.1E-18	6.2E-19
SE	13664	EU-154	7.3E-10	1.3E-16	1.1E-16
SE	13664	NI-63	4.2E-09	7.6E-16	6.3E-16
SE	13664	PU-238	1.8E-10	3.3E-17	2.7E-17
SE	13664	PU-239	2.4E-10	4.2E-17	3.5E-17
SE	13664	PU-240	2.4E-10	4.2E-17	3.5E-17
SE	13959	AM-241	5.0E-11	9.0E-18	7.5E-18
SE	13959	CO-60	2.6E-09	4.7E-16	3.9E-16
SE	13959	CS-137	1.3E-07	2.4E-14	2.0E-14
SE	13959	BA-137M	9.3E-12	1.7E-18	5.0E-19
SE	13959	EU-154	7.1E-10	1.3E-16	1.1E-16
SE	13959	NI-63	4.1E-09	7.4E-16	6.2E-16
SE	13959	PU-238	1.8E-10	3.2E-17	2.7E-17
SE	13959	PU-239	2.3E-10	4.1E-17	3.4E-17
SE	13959	PU-240	2.3E-10	4.1E-17	3.4E-17
SE	14258	AM-241	4.9E-11	8.8E-18	7.3E-18
SE	14258	CO-60	2.5E-09	4.6E-16	3.8E-16
SE	14258	CS-137	1.3E-07	2.3E-14	1.9E-14
SE	14258	BA-137M	7.5E-12	1.3E-18	4.1E-19
SE	14258	EU-154	6.9E-10	1.3E-16	1.0E-16
SE	14258	NI-63	4.0E-09	7.2E-16	6.0E-16
SE	14258	PU-238	1.7E-10	3.1E-17	2.6E-17
SE	14258	PU-239	2.2E-10	4.0E-17	3.3E-17
SE	14258	PU-240	2.2E-10	4.0E-17	3.3E-17
SE	14374	AM-241	4.8E-11	8.7E-18	7.2E-18
SE	14374	CO-60	2.5E-09	4.5E-16	3.8E-16
SE	14374	CS-137	1.3E-07	2.3E-14	1.9E-14
SE	14374	BA-137M	6.8E-12	1.2E-18	3.8E-19
SE	14374	EU-154	6.9E-10	1.2E-16	1.0E-16
SE	14374	NI-63	4.0E-09	7.1E-16	6.0E-16
SE	14374	PU-238	1.7E-10	3.1E-17	2.6E-17
SE	14374	PU-239	2.2E-10	4.0E-17	3.3E-17
SE	14374	PU-240	2.2E-10	4.0E-17	3.3E-17
SE	15241	AM-241	4.5E-11	8.0E-18	6.8E-18

ESTIMATED RADIONUCLIDE CONCENTRATIONS
AT VARIOUS LOCATIONS IN THE ENVIRONMENT

Wind Toward	Distance (meters)	Nuclide	Dry	Wet	Ground
			Air Concentration (pCi/m ³)	Deposition Rate (pCi/cm ² /s)	Deposition Rate (pCi/cm ² /s)
SE	15241	CO-60	2.3E-09	4.2E-16	3.6E-16
SE	15241	CS-137	1.2E-07	2.1E-14	1.8E-14
SE	15241	BA-137M	3.6E-12	6.5E-19	2.0E-19
SE	15241	EU-154	6.4E-10	1.1E-16	9.7E-17
SE	15241	NI-63	3.7E-09	6.6E-16	5.6E-16
SE	15241	PU-238	1.6E-10	2.9E-17	2.4E-17
SE	15241	PU-239	2.0E-10	3.7E-17	3.1E-17
SE	15241	PU-240	2.0E-10	3.7E-17	3.1E-17
SE	15441	AM-241	4.4E-11	7.9E-18	6.7E-18
SE	15441	CO-60	2.3E-09	4.1E-16	3.5E-16
SE	15441	CS-137	1.2E-07	2.1E-14	1.8E-14
SE	15441	BA-137M	3.1E-12	5.6E-19	1.8E-19
SE	15441	EU-154	6.3E-10	1.1E-16	9.6E-17
SE	15441	NI-63	3.6E-09	6.5E-16	5.6E-16
SE	15441	PU-238	1.6E-10	2.8E-17	2.4E-17
SE	15441	PU-239	2.0E-10	3.6E-17	3.1E-17
SE	15441	PU-240	2.0E-10	3.6E-17	3.1E-17
SE	15784	AM-241	4.3E-11	7.7E-18	6.6E-18
SE	15784	CO-60	2.2E-09	4.0E-16	3.4E-16
SE	15784	CS-137	1.1E-07	2.0E-14	1.7E-14
SE	15784	BA-137M	2.4E-12	4.4E-19	1.4E-19
SE	15784	EU-154	6.1E-10	1.1E-16	9.4E-17
SE	15784	NI-63	3.5E-09	6.3E-16	5.4E-16
SE	15784	PU-238	1.5E-10	2.7E-17	2.3E-17
SE	15784	PU-239	1.9E-10	3.5E-17	3.0E-17
SE	15784	PU-240	1.9E-10	3.5E-17	3.0E-17
SE	15844	AM-241	4.2E-11	7.6E-18	6.6E-18
SE	15844	CO-60	2.2E-09	4.0E-16	3.4E-16
SE	15844	CS-137	1.1E-07	2.0E-14	1.7E-14
SE	15844	BA-137M	2.3E-12	4.2E-19	1.3E-19
SE	15844	EU-154	6.0E-10	1.1E-16	9.4E-17
SE	15844	NI-63	3.5E-09	6.3E-16	5.4E-16
SE	15844	PU-238	1.5E-10	2.7E-17	2.3E-17
SE	15844	PU-239	1.9E-10	3.5E-17	3.0E-17
SE	15844	PU-240	1.9E-10	3.5E-17	3.0E-17
SE	16323	AM-241	4.1E-11	7.3E-18	6.4E-18
SE	16323	CO-60	2.1E-09	3.8E-16	3.3E-16
SE	16323	CS-137	1.1E-07	1.9E-14	1.7E-14
SE	16323	BA-137M	1.6E-12	3.0E-19	9.5E-20
SE	16323	EU-154	5.8E-10	1.0E-16	9.1E-17
SE	16323	NI-63	3.4E-09	6.0E-16	5.2E-16
SE	16323	PU-238	1.5E-10	2.6E-17	2.3E-17
SE	16323	PU-239	1.9E-10	3.3E-17	2.9E-17
SE	16323	PU-240	1.9E-10	3.3E-17	2.9E-17
SE	17329	AM-241	3.8E-11	6.8E-18	6.0E-18
SE	17329	CO-60	2.0E-09	3.5E-16	3.1E-16
SE	17329	CS-137	1.0E-07	1.8E-14	1.6E-14

ESTIMATED RADIONUCLIDE CONCENTRATIONS
AT VARIOUS LOCATIONS IN THE ENVIRONMENT

Wind Toward	Distance (meters)	Nuclide	Dry	Wet	Ground
			Air Concentration (pCi/m ³)	Deposition Rate (pCi/cm ² /s)	Deposition Rate (pCi/cm ² /s)
SE	17329	BA-137M	7.9E-13	1.4E-19	4.7E-20
SE	17329	EU-154	5.4E-10	9.7E-17	8.5E-17
SE	17329	NI-63	3.1E-09	5.6E-16	4.9E-16
SE	17329	PU-238	1.3E-10	2.4E-17	2.1E-17
SE	17329	PU-239	1.7E-10	3.1E-17	2.7E-17
SE	17329	PU-240	1.7E-10	3.1E-17	2.7E-17
ESE	10344	AM-241	4.4E-11	7.9E-18	7.8E-18
ESE	10344	CO-60	2.3E-09	4.1E-16	4.1E-16
ESE	10344	CS-137	1.2E-07	2.1E-14	2.1E-14
ESE	10344	BA-137M	2.7E-11	4.8E-18	2.0E-18
ESE	10344	EU-154	6.2E-10	1.1E-16	1.1E-16
ESE	10344	NI-63	3.6E-09	6.5E-16	6.5E-16
ESE	10344	PU-238	1.6E-10	2.8E-17	2.8E-17
ESE	10344	PU-239	2.0E-10	3.6E-17	3.6E-17
ESE	10344	PU-240	2.0E-10	3.6E-17	3.6E-17
ESE	10365	AM-241	4.4E-11	7.9E-18	7.8E-18
ESE	10365	CO-60	2.3E-09	4.1E-16	4.1E-16
ESE	10365	CS-137	1.2E-07	2.1E-14	2.1E-14
ESE	10365	BA-137M	2.6E-11	4.7E-18	2.0E-18
ESE	10365	EU-154	6.2E-10	1.1E-16	1.1E-16
ESE	10365	NI-63	3.6E-09	6.5E-16	6.5E-16
ESE	10365	PU-238	1.6E-10	2.8E-17	2.8E-17
ESE	10365	PU-239	2.0E-10	3.6E-17	3.6E-17
ESE	10365	PU-240	2.0E-10	3.6E-17	3.6E-17
ESE	10472	AM-241	4.3E-11	7.8E-18	7.7E-18
ESE	10472	CO-60	2.2E-09	4.0E-16	4.0E-16
ESE	10472	CS-137	1.1E-07	2.1E-14	2.1E-14
ESE	10472	BA-137M	2.4E-11	4.3E-18	1.8E-18
ESE	10472	EU-154	6.2E-10	1.1E-16	1.1E-16
ESE	10472	NI-63	3.6E-09	6.4E-16	6.4E-16
ESE	10472	PU-238	1.5E-10	2.8E-17	2.8E-17
ESE	10472	PU-239	2.0E-10	3.5E-17	3.5E-17
ESE	10472	PU-240	2.0E-10	3.5E-17	3.5E-17
ESE	10590	AM-241	4.2E-11	7.6E-18	7.7E-18
ESE	10590	CO-60	2.2E-09	4.0E-16	4.0E-16
ESE	10590	CS-137	1.1E-07	2.0E-14	2.0E-14
ESE	10590	BA-137M	2.2E-11	3.9E-18	1.6E-18
ESE	10590	EU-154	6.1E-10	1.1E-16	1.1E-16
ESE	10590	NI-63	3.5E-09	6.3E-16	6.3E-16
ESE	10590	PU-238	1.5E-10	2.7E-17	2.7E-17
ESE	10590	PU-239	1.9E-10	3.5E-17	3.5E-17
ESE	10590	PU-240	1.9E-10	3.5E-17	3.5E-17
ESE	11103	AM-241	4.0E-11	7.2E-18	7.3E-18
ESE	11103	CO-60	2.1E-09	3.8E-16	3.8E-16
ESE	11103	CS-137	1.1E-07	1.9E-14	1.9E-14
ESE	11103	BA-137M	1.4E-11	2.5E-18	1.1E-18
ESE	11103	EU-154	5.7E-10	1.0E-16	1.0E-16

ESTIMATED RADIONUCLIDE CONCENTRATIONS
AT VARIOUS LOCATIONS IN THE ENVIRONMENT

Wind Toward	Distance (meters)	Nuclide	Dry	Wet	Ground
			Air Concentration (pCi/m ³)	Deposition Rate (pCi/cm ² /s)	Deposition Rate (pCi/cm ² /s)
ESE	11103	NI-63	3.3E-09	6.0E-16	1.2E-15
ESE	11103	PU-238	1.4E-10	2.6E-17	5.2E-17
ESE	11103	PU-239	1.8E-10	3.3E-17	6.6E-17
ESE	11103	PU-240	1.8E-10	3.3E-17	6.6E-17
ESE	11989	AM-241	3.6E-11	6.6E-18	1.3E-17
ESE	11989	CO-60	1.9E-09	3.4E-16	6.9E-16
ESE	11989	CS-137	9.7E-08	1.7E-14	3.5E-14
ESE	11989	BA-137M	6.6E-12	1.2E-18	5.1E-19
ESE	11989	EU-154	5.2E-10	9.4E-17	9.6E-17
ESE	11989	NI-63	3.0E-09	5.4E-16	1.1E-15
ESE	11989	PU-238	1.3E-10	2.3E-17	4.7E-17
ESE	11989	PU-239	1.7E-10	3.0E-17	6.1E-17
ESE	11989	PU-240	1.7E-10	3.0E-17	6.1E-17
ESE	13245	AM-241	3.2E-11	5.8E-18	1.2E-17
ESE	13245	CO-60	1.7E-09	3.0E-16	6.2E-16
ESE	13245	CS-137	8.6E-08	1.5E-14	3.2E-14
ESE	13245	BA-137M	2.3E-12	4.2E-19	1.8E-19
ESE	13245	EU-154	4.6E-10	8.3E-17	1.7E-16
ESE	13245	NI-63	2.7E-09	4.8E-16	9.8E-16
ESE	13245	PU-238	1.2E-10	2.1E-17	4.2E-17
ESE	13245	PU-239	1.5E-10	2.7E-17	5.4E-17
ESE	13245	PU-240	1.5E-10	2.7E-17	5.4E-17
ESE	13286	AM-241	3.2E-11	5.8E-18	1.2E-17
ESE	13286	CO-60	1.7E-09	3.0E-16	6.2E-16
ESE	13286	CS-137	8.5E-08	1.5E-14	3.1E-14
ESE	13286	BA-137M	2.2E-12	4.0E-19	1.8E-19
ESE	13286	EU-154	4.6E-10	8.3E-17	1.7E-16
ESE	13286	NI-63	2.6E-09	4.8E-16	9.8E-16
ESE	13286	PU-238	1.1E-10	2.1E-17	4.2E-17
ESE	13286	PU-239	1.5E-10	2.6E-17	5.4E-17
ESE	13286	PU-240	1.5E-10	2.6E-17	5.4E-17
ESE	13483	AM-241	3.2E-11	5.7E-18	1.2E-17
ESE	13483	CO-60	1.6E-09	3.0E-16	6.1E-16
ESE	13483	CS-137	8.4E-08	1.5E-14	3.1E-14
ESE	13483	BA-137M	1.9E-12	3.4E-19	1.5E-19
ESE	13483	EU-154	4.5E-10	8.1E-17	1.7E-16
ESE	13483	NI-63	2.6E-09	4.7E-16	9.6E-16
ESE	13483	PU-238	1.1E-10	2.0E-17	4.2E-17
ESE	13483	PU-239	1.4E-10	2.6E-17	5.3E-17
ESE	13483	PU-240	1.4E-10	2.6E-17	5.3E-17
ESE	13612	AM-241	3.1E-11	5.6E-18	1.2E-17
ESE	13612	CO-60	1.6E-09	2.9E-16	6.0E-16
ESE	13612	CS-137	8.3E-08	1.5E-14	3.1E-14
ESE	13612	BA-137M	1.7E-12	3.1E-19	4.4E-19
ESE	13612	EU-154	4.5E-10	8.0E-17	1.6E-16
ESE	13612	NI-63	2.6E-09	4.6E-16	9.5E-16
ESE	13612	PU-238	1.1E-10	2.0E-17	4.1E-17

ESTIMATED RADIONUCLIDE CONCENTRATIONS
AT VARIOUS LOCATIONS IN THE ENVIRONMENT

Wind Toward	Distance (meters)	Nuclide	Dry	Wet	Ground
			Air Concentration (pCi/m ³)	Deposition Rate (pCi/cm ² /s)	Deposition Rate (pCi/cm ² /s)
ESE	13612	PU-239	1.4E-10	2.6E-17	2.7E-17
ESE	13612	PU-240	1.4E-10	2.6E-17	2.7E-17
ESE	13664	AM-241	3.1E-11	5.6E-18	5.9E-18
ESE	13664	CO-60	1.6E-09	2.9E-16	3.1E-16
ESE	13664	CS-137	8.3E-08	1.5E-14	1.6E-14
ESE	13664	BA-137M	1.6E-12	3.0E-19	1.3E-19
ESE	13664	EU-154	4.4E-10	8.0E-17	8.4E-17
ESE	13664	NI-63	2.6E-09	4.6E-16	4.9E-16
ESE	13664	PU-238	1.1E-10	2.0E-17	2.1E-17
ESE	13664	PU-239	1.4E-10	2.6E-17	2.7E-17
ESE	13664	PU-240	1.4E-10	2.6E-17	2.7E-17
ESE	13959	AM-241	3.0E-11	5.4E-18	5.8E-18
ESE	13959	CO-60	1.6E-09	2.8E-16	3.0E-16
ESE	13959	CS-137	8.0E-08	1.4E-14	1.5E-14
ESE	13959	BA-137M	1.3E-12	2.3E-19	1.0E-19
ESE	13959	EU-154	4.3E-10	7.8E-17	8.2E-17
ESE	13959	NI-63	2.5E-09	4.5E-16	4.7E-16
ESE	13959	PU-238	1.1E-10	1.9E-17	2.1E-17
ESE	13959	PU-239	1.4E-10	2.5E-17	2.6E-17
ESE	13959	PU-240	1.4E-10	2.5E-17	2.6E-17
ESE	14258	AM-241	2.9E-11	5.3E-18	5.6E-18
ESE	14258	CO-60	1.5E-09	2.8E-16	2.9E-16
ESE	14258	CS-137	7.8E-08	1.4E-14	1.5E-14
ESE	14258	BA-137M	1.0E-12	1.8E-19	8.0E-20
ESE	14258	EU-154	4.2E-10	7.6E-17	8.0E-17
ESE	14258	NI-63	2.4E-09	4.4E-16	4.6E-16
ESE	14258	PU-238	1.1E-10	1.9E-17	2.0E-17
ESE	14258	PU-239	1.3E-10	2.4E-17	2.6E-17
ESE	14258	PU-240	1.3E-10	2.4E-17	2.6E-17
ESE	14374	AM-241	2.9E-11	5.2E-18	5.6E-18
ESE	14374	CO-60	1.5E-09	2.7E-16	2.9E-16
ESE	14374	CS-137	7.8E-08	1.4E-14	1.5E-14
ESE	14374	BA-137M	9.2E-13	1.7E-19	7.3E-20
ESE	14374	EU-154	4.2E-10	7.5E-17	8.0E-17
ESE	14374	NI-63	2.4E-09	4.3E-16	4.6E-16
ESE	14374	PU-238	1.0E-10	1.9E-17	2.0E-17
ESE	14374	PU-239	1.3E-10	2.4E-17	2.6E-17
ESE	14374	PU-240	1.3E-10	2.4E-17	2.6E-17
ESE	15241	AM-241	2.7E-11	4.9E-18	5.3E-18
ESE	15241	CO-60	1.4E-09	2.5E-16	2.7E-16
ESE	15241	CS-137	7.2E-08	1.3E-14	1.4E-14
ESE	15241	BA-137M	4.5E-13	8.2E-20	3.6E-20
ESE	15241	EU-154	3.9E-10	7.0E-17	7.5E-17
ESE	15241	NI-63	2.2E-09	4.0E-16	4.3E-16
ESE	15241	PU-238	9.7E-11	1.7E-17	1.9E-17
ESE	15241	PU-239	1.2E-10	2.2E-17	2.4E-17
ESE	15241	PU-240	1.2E-10	2.2E-17	2.4E-17

ESTIMATED RADIONUCLIDE CONCENTRATIONS
AT VARIOUS LOCATIONS IN THE ENVIRONMENT

Wind Toward	Distance (meters)	Nuclide	Dry	Wet	Ground
			Air Concentration (pCi/m ³)	Deposition Rate (pCi/cm ² /s)	Deposition Rate (pCi/cm ² /s)
ESE	15441	AM-241	2.7E-11	4.8E-18	5.2E-18
ESE	15441	CO-60	1.4E-09	2.5E-16	2.7E-16
ESE	15441	CS-137	7.1E-08	1.3E-14	1.4E-14
ESE	15441	BA-137M	3.9E-13	6.9E-20	3.1E-20
ESE	15441	EU-154	3.8E-10	6.9E-17	7.4E-17
ESE	15441	NI-63	2.2E-09	4.0E-16	4.3E-16
ESE	15441	PU-238	9.5E-11	1.7E-17	1.8E-17
ESE	15441	PU-239	1.2E-10	2.2E-17	2.4E-17
ESE	15441	PU-240	1.2E-10	2.2E-17	2.4E-17
ESE	15784	AM-241	2.6E-11	4.7E-18	5.1E-18
ESE	15784	CO-60	1.4E-09	2.4E-16	2.6E-16
ESE	15784	CS-137	6.9E-08	1.2E-14	1.3E-14
ESE	15784	BA-137M	2.9E-13	5.3E-20	2.4E-20
ESE	15784	EU-154	3.7E-10	6.7E-17	7.2E-17
ESE	15784	NI-63	2.1E-09	3.9E-16	4.2E-16
ESE	15784	PU-238	9.3E-11	1.7E-17	1.8E-17
ESE	15784	PU-239	1.2E-10	2.1E-17	2.3E-17
ESE	15784	PU-240	1.2E-10	2.1E-17	2.3E-17
ESE	15844	AM-241	2.6E-11	4.7E-18	5.0E-18
ESE	15844	CO-60	1.3E-09	2.4E-16	2.6E-16
ESE	15844	CS-137	6.9E-08	1.2E-14	1.3E-14
ESE	15844	BA-137M	2.8E-13	5.0E-20	2.2E-20
ESE	15844	EU-154	3.7E-10	6.7E-17	7.2E-17
ESE	15844	NI-63	2.1E-09	3.8E-16	4.2E-16
ESE	15844	PU-238	9.2E-11	1.7E-17	1.8E-17
ESE	15844	PU-239	1.2E-10	2.1E-17	2.3E-17
ESE	15844	PU-240	1.2E-10	2.1E-17	2.3E-17
ESE	16323	AM-241	2.5E-11	4.5E-18	4.9E-18
ESE	16323	CO-60	1.3E-09	2.3E-16	2.5E-16
ESE	16323	CS-137	6.6E-08	1.2E-14	1.3E-14
ESE	16323	BA-137M	1.9E-13	3.4E-20	1.5E-20
ESE	16323	EU-154	3.6E-10	6.4E-17	7.0E-17
ESE	16323	NI-63	2.1E-09	3.7E-16	4.0E-16
ESE	16323	PU-238	8.9E-11	1.6E-17	1.7E-17
ESE	16323	PU-239	1.1E-10	2.1E-17	2.2E-17
ESE	16323	PU-240	1.1E-10	2.1E-17	2.2E-17
ESE	17329	AM-241	2.3E-11	4.2E-18	4.6E-18
ESE	17329	CO-60	1.2E-09	2.2E-16	2.4E-16
ESE	17329	CS-137	6.2E-08	1.1E-14	1.2E-14
ESE	17329	BA-137M	8.4E-14	1.5E-20	6.9E-21
ESE	17329	EU-154	3.3E-10	6.0E-17	6.6E-17
ESE	17329	NI-63	1.9E-09	3.4E-16	3.8E-16
ESE	17329	PU-238	8.3E-11	1.5E-17	1.6E-17
ESE	17329	PU-239	1.1E-10	1.9E-17	2.1E-17
ESE	17329	PU-240	1.1E-10	1.9E-17	2.1E-17
E	10344	AM-241	5.8E-11	1.0E-17	9.6E-18
E	10344	CO-60	3.0E-09	5.5E-16	5.0E-16

ESTIMATED RADIONUCLIDE CONCENTRATIONS
AT VARIOUS LOCATIONS IN THE ENVIRONMENT

Wind Toward	Distance (meters)	Nuclide	Dry	Wet	Ground
			Air Concentration (pCi/m ³)	Deposition Rate (pCi/cm ² /s)	Deposition Rate (pCi/cm ² /s)
E	10344	CS-137	1.5E-07	2.8E-14	5.4E-14
E	10344	BA-137M	9.9E-11	1.8E-17	2.3E-17
E	10344	EU-154	8.3E-10	1.5E-16	2.9E-16
E	10344	NI-63	4.8E-09	8.7E-16	1.7E-15
E	10344	PU-238	2.1E-10	3.7E-17	3.4E-17
E	10344	PU-239	2.7E-10	4.8E-17	4.4E-17
E	10344	PU-240	2.7E-10	4.8E-17	4.4E-17
E	10365	AM-241	5.8E-11	1.0E-17	9.6E-18
E	10365	CO-60	3.0E-09	5.4E-16	5.0E-16
E	10365	CS-137	1.5E-07	2.8E-14	2.6E-14
E	10365	BA-137M	9.8E-11	1.8E-17	5.1E-18
E	10365	EU-154	8.3E-10	1.5E-16	1.4E-16
E	10365	NI-63	4.8E-09	8.6E-16	7.9E-16
E	10365	PU-238	2.1E-10	3.7E-17	3.4E-17
E	10365	PU-239	2.7E-10	4.8E-17	4.4E-17
E	10365	PU-240	2.7E-10	4.8E-17	4.4E-17
E	10472	AM-241	5.7E-11	1.0E-17	9.5E-18
E	10472	CO-60	3.0E-09	5.4E-16	5.0E-16
E	10472	CS-137	1.5E-07	2.7E-14	2.5E-14
E	10472	BA-137M	9.0E-11	1.6E-17	4.7E-18
E	10472	EU-154	8.2E-10	1.5E-16	1.4E-16
E	10472	NI-63	4.7E-09	8.5E-16	7.9E-16
E	10472	PU-238	2.0E-10	3.7E-17	3.4E-17
E	10472	PU-239	2.6E-10	4.7E-17	4.4E-17
E	10472	PU-240	2.6E-10	4.7E-17	4.4E-17
E	10590	AM-241	5.7E-11	1.0E-17	9.4E-18
E	10590	CO-60	2.9E-09	5.3E-16	4.9E-16
E	10590	CS-137	1.5E-07	2.7E-14	2.5E-14
E	10590	BA-137M	8.3E-11	1.5E-17	4.3E-18
E	10590	EU-154	8.1E-10	1.5E-16	1.3E-16
E	10590	NI-63	4.7E-09	8.4E-16	7.8E-16
E	10590	PU-238	2.0E-10	3.6E-17	3.4E-17
E	10590	PU-239	2.6E-10	4.6E-17	4.3E-17
E	10590	PU-240	2.6E-10	4.6E-17	4.3E-17
E	11103	AM-241	5.3E-11	9.6E-18	9.0E-18
E	11103	CO-60	2.8E-09	5.0E-16	4.7E-16
E	11103	CS-137	1.4E-07	2.5E-14	2.4E-14
E	11103	BA-137M	5.6E-11	1.0E-17	3.0E-18
E	11103	EU-154	7.6E-10	1.4E-16	1.3E-16
E	11103	NI-63	4.4E-09	7.9E-16	7.4E-16
E	11103	PU-238	1.9E-10	3.4E-17	3.2E-17
E	11103	PU-239	2.4E-10	4.4E-17	4.1E-17
E	11103	PU-240	2.4E-10	4.4E-17	4.1E-17
E	11989	AM-241	4.8E-11	8.7E-18	8.3E-18
E	11989	CO-60	2.5E-09	4.5E-16	4.3E-16
E	11989	CS-137	1.3E-07	2.3E-14	2.2E-14
E	11989	BA-137M	2.9E-11	5.2E-18	1.6E-18

ESTIMATED RADIONUCLIDE CONCENTRATIONS
AT VARIOUS LOCATIONS IN THE ENVIRONMENT

Wind Toward	Distance (meters)	Nuclide	Dry	Wet	Ground
			Air Concentration (pCi/m ³)	Deposition Rate (pCi/cm ² /s)	Deposition Rate (pCi/cm ² /s)
E	11989	EU-154	6.9E-10	1.2E-16	2.4E-16
E	11989	NI-63	4.0E-09	7.2E-16	1.4E-15
E	11989	PU-238	1.7E-10	3.1E-17	6.1E-17
E	11989	PU-239	2.2E-10	4.0E-17	7.8E-17
E	11989	PU-240	2.2E-10	4.0E-17	7.8E-17
E	13245	AM-241	4.2E-11	7.6E-18	1.5E-17
E	13245	CO-60	2.2E-09	4.0E-16	7.9E-16
E	13245	CS-137	1.1E-07	2.0E-14	4.0E-14
E	13245	BA-137M	1.2E-11	2.1E-18	2.7E-18
E	13245	EU-154	6.1E-10	1.1E-16	2.2E-16
E	13245	NI-63	3.5E-09	6.3E-16	1.2E-15
E	13245	PU-238	1.5E-10	2.7E-17	5.4E-17
E	13245	PU-239	1.9E-10	3.5E-17	6.9E-17
E	13245	PU-240	1.9E-10	3.5E-17	6.9E-17
E	13286	AM-241	4.2E-11	7.6E-18	1.5E-17
E	13286	CO-60	2.2E-09	4.0E-16	7.8E-16
E	13286	CS-137	1.1E-07	2.0E-14	4.0E-14
E	13286	BA-137M	1.1E-11	2.0E-18	2.6E-18
E	13286	EU-154	6.0E-10	1.1E-16	2.2E-16
E	13286	NI-63	3.5E-09	6.3E-16	1.2E-15
E	13286	PU-238	1.5E-10	2.7E-17	5.4E-17
E	13286	PU-239	1.9E-10	3.5E-17	6.9E-17
E	13286	PU-240	1.9E-10	3.5E-17	6.9E-17
E	13483	AM-241	4.1E-11	7.5E-18	1.5E-17
E	13483	CO-60	2.2E-09	3.9E-16	7.7E-16
E	13483	CS-137	1.1E-07	2.0E-14	3.9E-14
E	13483	BA-137M	9.8E-12	1.8E-18	2.3E-18
E	13483	EU-154	5.9E-10	1.1E-16	2.1E-16
E	13483	NI-63	3.4E-09	6.2E-16	1.2E-15
E	13483	PU-238	1.5E-10	2.7E-17	5.3E-17
E	13483	PU-239	1.9E-10	3.4E-17	6.8E-17
E	13483	PU-240	1.9E-10	3.4E-17	6.8E-17
E	13612	AM-241	4.1E-11	7.4E-18	1.5E-17
E	13612	CO-60	2.1E-09	3.8E-16	7.6E-16
E	13612	CS-137	1.1E-07	2.0E-14	3.9E-14
E	13612	BA-137M	8.9E-12	1.6E-18	2.1E-18
E	13612	EU-154	5.9E-10	1.1E-16	2.1E-16
E	13612	NI-63	3.4E-09	6.1E-16	1.2E-15
E	13612	PU-238	1.5E-10	2.6E-17	5.2E-17
E	13612	PU-239	1.9E-10	3.4E-17	6.7E-17
E	13612	PU-240	1.9E-10	3.4E-17	6.7E-17
E	13664	AM-241	4.1E-11	7.3E-18	1.5E-17
E	13664	CO-60	2.1E-09	3.8E-16	7.6E-16
E	13664	CS-137	1.1E-07	2.0E-14	3.9E-14
E	13664	BA-137M	8.6E-12	1.5E-18	2.0E-18
E	13664	EU-154	5.8E-10	1.0E-16	2.1E-16
E	13664	NI-63	3.4E-09	6.1E-16	1.2E-15

ESTIMATED RADIONUCLIDE CONCENTRATIONS
AT VARIOUS LOCATIONS IN THE ENVIRONMENT

Wind Toward	Distance (meters)	Nuclide	Dry	Wet	Ground
			Air Concentration (pCi/m ³)	Deposition Rate (pCi/cm ² /s)	Deposition Rate (pCi/cm ² /s)
E	13664	PU-238	1.5E-10	2.6E-17	5.2E-17
E	13664	PU-239	1.9E-10	3.4E-17	6.7E-17
E	13664	PU-240	1.9E-10	3.4E-17	6.7E-17
E	13959	AM-241	4.0E-11	7.1E-18	1.4E-17
E	13959	CO-60	2.1E-09	3.7E-16	7.4E-16
E	13959	CS-137	1.1E-07	1.9E-14	3.8E-14
E	13959	BA-137M	6.9E-12	1.2E-18	3.9E-19
E	13959	EU-154	5.7E-10	1.0E-16	2.0E-16
E	13959	NI-63	3.3E-09	5.9E-16	5.8E-16
E	13959	PU-238	1.4E-10	2.5E-17	5.1E-17
E	13959	PU-239	1.8E-10	3.3E-17	6.5E-17
E	13959	PU-240	1.8E-10	3.3E-17	6.5E-17
E	14258	AM-241	3.9E-11	7.0E-18	1.4E-17
E	14258	CO-60	2.0E-09	3.6E-16	7.2E-16
E	14258	CS-137	1.0E-07	1.8E-14	3.7E-14
E	14258	BA-137M	5.6E-12	1.0E-18	3.2E-19
E	14258	EU-154	5.5E-10	9.9E-17	2.0E-16
E	14258	NI-63	3.2E-09	5.7E-16	5.7E-16
E	14258	PU-238	1.4E-10	2.5E-17	5.0E-17
E	14258	PU-239	1.8E-10	3.2E-17	6.3E-17
E	14258	PU-240	1.8E-10	3.2E-17	6.3E-17
E	14374	AM-241	3.8E-11	6.9E-18	1.4E-17
E	14374	CO-60	2.0E-09	3.6E-16	7.2E-16
E	14374	CS-137	1.0E-07	1.8E-14	3.7E-14
E	14374	BA-137M	5.2E-12	9.3E-19	1.2E-18
E	14374	EU-154	5.5E-10	9.8E-17	2.0E-16
E	14374	NI-63	3.2E-09	5.7E-16	5.7E-16
E	14374	PU-238	1.4E-10	2.5E-17	4.9E-17
E	14374	PU-239	1.7E-10	3.1E-17	6.3E-17
E	14374	PU-240	1.7E-10	3.1E-17	6.3E-17
E	15241	AM-241	3.5E-11	6.4E-18	1.3E-17
E	15241	CO-60	1.8E-09	3.3E-16	6.7E-16
E	15241	CS-137	9.4E-08	1.7E-14	3.4E-14
E	15241	BA-137M	2.8E-12	5.0E-19	1.6E-19
E	15241	EU-154	5.1E-10	9.1E-17	9.2E-17
E	15241	NI-63	2.9E-09	5.3E-16	5.3E-16
E	15241	PU-238	1.3E-10	2.3E-17	4.6E-17
E	15241	PU-239	1.6E-10	2.9E-17	5.9E-17
E	15241	PU-240	1.6E-10	2.9E-17	5.9E-17
E	15441	AM-241	3.5E-11	6.3E-18	1.3E-17
E	15441	CO-60	1.8E-09	3.3E-16	6.6E-16
E	15441	CS-137	9.3E-08	1.7E-14	3.4E-14
E	15441	BA-137M	2.4E-12	4.3E-19	1.4E-19
E	15441	EU-154	5.0E-10	9.0E-17	9.1E-17
E	15441	NI-63	2.9E-09	5.2E-16	5.3E-16
E	15441	PU-238	1.2E-10	2.2E-17	4.5E-17
E	15441	PU-239	1.6E-10	2.9E-17	5.8E-17

ESTIMATED RADIONUCLIDE CONCENTRATIONS
AT VARIOUS LOCATIONS IN THE ENVIRONMENT

Wind Toward	Distance (meters)	Nuclide	Dry	Wet	Ground
			Air Concentration (pCi/m ³)	Deposition Rate (pCi/cm ² /s)	Deposition Rate (pCi/cm ² /s)
E	15441	PU-240	1.6E-10	2.9E-17	5.8E-17
E	15784	AM-241	3.4E-11	6.1E-18	1.2E-17
E	15784	CO-60	1.8E-09	3.2E-16	6.4E-16
E	15784	CS-137	9.0E-08	1.6E-14	3.3E-14
E	15784	BA-137M	1.9E-12	3.4E-19	1.1E-19
E	15784	EU-154	4.8E-10	8.7E-17	8.9E-17
E	15784	NI-63	2.8E-09	5.0E-16	5.1E-16
E	15784	PJ-238	1.2E-10	2.2E-17	2.2E-17
E	15784	PU-239	1.6E-10	2.8E-17	2.9E-17
E	15784	PU-240	1.6E-10	2.8E-17	2.9E-17
E	15844	AM-241	3.4E-11	6.1E-18	6.2E-18
E	15844	CO-60	1.8E-09	3.2E-16	3.2E-16
E	15844	CS-137	9.0E-08	1.6E-14	1.7E-14
E	15844	BA-137M	1.8E-12	3.3E-19	1.1E-19
E	15844	EU-154	4.8E-10	8.7E-17	8.9E-17
E	15844	NI-63	2.8E-09	5.0E-16	5.1E-16
E	15844	PJ-238	1.2E-10	2.2E-17	2.2E-17
E	15844	PU-239	1.5E-10	2.8E-17	2.8E-17
E	15844	PU-240	1.5E-10	2.8E-17	2.8E-17
E	16323	AM-241	3.3E-11	5.9E-18	6.0E-18
E	16323	CO-60	1.7E-09	3.0E-16	3.1E-16
E	16323	CS-137	8.7E-08	1.6E-14	1.6E-14
E	16323	BA-137M	1.3E-12	2.3E-19	7.6E-20
E	16323	EU-154	4.6E-10	8.4E-17	8.6E-17
E	16323	NI-63	2.7E-09	4.8E-16	5.0E-16
E	16323	PU-238	1.2E-10	2.1E-17	2.2E-17
E	16323	PU-239	1.5E-10	2.7E-17	2.8E-17
E	16323	PU-240	1.5E-10	2.7E-17	2.8E-17
E	17329	AM-241	3.0E-11	5.4E-18	5.7E-18
E	17329	CO-60	1.6E-09	2.8E-16	2.9E-16
E	17329	CS-137	8.0E-08	1.4E-14	1.5E-14
E	17329	BA-137M	6.4E-13	1.2E-19	3.9E-20
E	17329	EU-154	4.3E-10	7.8E-17	8.1E-17
E	17329	NI-63	2.5E-09	4.5E-16	4.7E-16
E	17329	PU-238	1.1E-10	1.9E-17	2.0E-17
E	17329	PU-239	1.4E-10	2.5E-17	2.6E-17
E	17329	PU-240	1.4E-10	2.5E-17	2.6E-17
ENE	10344	AM-241	2.4E-10	4.3E-17	2.6E-17
ENE	10344	CO-60	1.2E-08	2.2E-15	1.3E-15
ENE	10344	CS-137	6.3E-07	1.1E-13	6.9E-14
ENE	10344	BA-137M	1.1E-09	2.0E-16	4.9E-17
ENE	10344	EU-154	3.4E-09	6.1E-16	3.7E-16
ENE	10344	NI-63	2.0E-08	3.5E-15	2.1E-15
ENE	10344	PU-238	8.5E-10	1.5E-16	9.2E-17
ENE	10344	PU-239	1.1E-09	2.0E-16	1.2E-16
ENE	10344	PU-240	1.1E-09	2.0E-16	1.2E-16
ENE	10365	AM-241	2.4E-10	4.3E-17	2.6E-17

ESTIMATED RADIONUCLIDE CONCENTRATIONS
AT VARIOUS LOCATIONS IN THE ENVIRONMENT

Wind Toward	Distance (meters)	Nuclide	Dry	Wet	Ground
			Air Concentration (pCi/m ³)	Deposition Rate (pCi/cm ² /s)	Deposition Rate (pCi/cm ² /s)
ENE	10365	CO-60	1.2E-08	2.2E-15	3.6E-15
ENE	10365	CS-137	6.3E-07	1.1E-13	6.9E-14
ENE	10365	BA-137M	1.1E-09	2.0E-16	4.9E-17
ENE	10365	EU-154	3.4E-09	6.1E-16	3.7E-16
ENE	10365	NI-63	2.0E-08	3.5E-15	2.1E-15
ENE	10365	PU-238	8.4E-10	1.5E-16	9.2E-17
ENE	10365	PU-239	1.1E-09	1.9E-16	1.2E-16
ENE	10365	PU-240	1.1E-09	1.9E-16	1.2E-16
ENE	10472	AM-241	2.3E-10	4.2E-17	2.6E-17
ENE	10472	CO-60	1.2E-08	2.2E-15	1.3E-15
ENE	10472	CS-137	6.2E-07	1.1E-13	6.8E-14
ENE	10472	BA-137M	1.0E-09	1.8E-16	4.5E-17
ENE	10472	EU-154	3.3E-09	6.0E-16	3.7E-16
ENE	10472	NI-63	1.9E-08	3.5E-15	2.1E-15
ENE	10472	PU-238	8.3E-10	1.5E-16	9.1E-17
ENE	10472	PU-239	1.1E-09	1.9E-16	1.2E-16
ENE	10472	PU-240	1.1E-09	1.9E-16	1.2E-16
NE	10590	AM-241	2.3E-10	4.1E-17	2.5E-17
NE	10590	CO-60	1.2E-08	2.2E-15	1.3E-15
NE	10590	CS-137	6.1E-07	1.1E-13	6.7E-14
NE	10590	BA-137M	9.2E-10	1.7E-16	4.2E-17
NE	10590	EU-154	3.3E-09	5.9E-16	3.6E-16
NE	10590	NI-63	1.9E-08	3.4E-15	2.1E-15
NE	10590	PU-238	8.2E-10	1.5E-16	9.0E-17
NE	10590	PU-239	1.0E-09	1.9E-16	1.2E-16
NE	10590	PU-240	1.0E-09	1.9E-16	1.2E-16
ENE	11103	AM-241	2.1E-10	3.9E-17	2.4E-17
ENE	11103	CO-60	1.1E-08	2.0E-15	1.3E-15
ENE	11103	CS-137	5.7E-07	1.0E-13	6.4E-14
ENE	11103	BA-137M	6.4E-10	1.2E-16	3.0E-17
ENE	11103	EU-154	3.1E-09	5.5E-16	3.4E-16
ENE	11103	NI-63	1.8E-08	3.2E-15	2.0E-15
ENE	11103	PU-238	7.7E-10	1.4E-16	8.6E-17
ENE	11103	PU-239	9.8E-10	1.8E-16	1.1E-16
ENE	11103	PU-240	9.8E-10	1.8E-16	1.1E-16
ENE	11989	AM-241	1.9E-10	3.5E-17	2.2E-17
ENE	11989	CO-60	1.0E-08	1.8E-15	1.2E-15
ENE	11989	CS-137	5.1E-07	9.2E-14	5.9E-14
ENE	11989	BA-137M	3.5E-10	6.3E-17	1.7E-17
ENE	11989	EU-154	2.7E-09	4.9E-16	3.2E-16
ENE	11989	NI-63	1.6E-08	2.9E-15	1.8E-15
ENE	11989	PU-238	6.9E-10	1.2E-16	8.0E-17
ENE	11989	PU-239	8.8E-10	1.6E-16	1.0E-16
NE	11989	PU-240	8.8E-10	1.6E-16	1.0E-16
NE	13245	AM-241	1.7E-10	3.0E-17	2.0E-17
NE	13245	CO-60	8.7E-09	1.6E-15	1.0E-15
NE	13245	CS-137	4.4E-07	8.0E-14	5.4E-14

ESTIMATED RADIONUCLIDE CONCENTRATIONS
AT VARIOUS LOCATIONS IN THE ENVIRONMENT

Wind Toward	Distance (meters)	Nuclide	Dry	Wet	Ground
			Air Concentration (pCi/m ³)	Deposition Rate (pCi/cm ² /s)	Deposition Rate (pCi/cm ² /s)
ENE	13245	BA-137M	1.5E-10	2.6E-17	7.4E-18
ENE	13245	EU-154	2.4E-09	4.3E-16	2.9E-16
ENE	13245	NI-63	1.4E-08	2.5E-15	1.7E-15
ENE	13245	PU-238	6.0E-10	1.1E-16	7.2E-17
ENE	13245	PU-239	7.6E-10	1.4E-16	9.2E-17
ENE	13245	PU-240	7.6E-10	1.4E-16	9.2E-17
ENE	13286	AM-241	1.7E-10	3.0E-17	2.0E-17
ENE	13286	CO-60	8.7E-09	1.6E-15	1.0E-15
ENE	13286	CS-137	4.4E-07	8.0E-14	5.3E-14
ENE	13286	BA-137M	1.4E-10	2.6E-17	7.2E-18
ENE	13286	EU-154	2.4E-09	4.3E-16	2.9E-16
ENE	13286	NI-63	1.4E-08	2.5E-15	1.7E-15
ENE	13286	PU-238	5.9E-10	1.1E-16	7.2E-17
ENE	13286	PU-239	7.6E-10	1.4E-16	9.2E-17
ENE	13286	PU-240	7.6E-10	1.4E-16	9.2E-17
ENE	13483	AM-241	1.6E-10	2.9E-17	2.0E-17
ENE	13483	CO-60	8.5E-09	1.5E-15	1.0E-15
ENE	13483	CS-137	4.3E-07	7.8E-14	5.3E-14
ENE	13483	BA-137M	1.3E-10	2.3E-17	6.3E-18
ENE	13483	EU-154	2.3E-09	4.2E-16	2.8E-16
ENE	13483	NI-63	1.3E-08	2.4E-15	1.6E-15
ENE	13483	PU-238	5.8E-10	1.0E-16	7.1E-17
ENE	13483	PU-239	7.4E-10	1.3E-16	9.0E-17
ENE	13483	PU-240	7.4E-10	1.3E-16	9.0E-17
ENE	13612	AM-241	1.6E-10	2.9E-17	2.0E-17
ENE	13612	CO-60	8.4E-09	1.5E-15	1.0E-15
ENE	13612	CS-137	4.3E-07	7.7E-14	5.2E-14
ENE	13612	BA-137M	1.1E-10	2.1E-17	5.8E-18
ENE	13612	EU-154	2.3E-09	4.1E-16	2.8E-16
ENE	13612	NI-63	1.3E-08	2.4E-15	1.6E-15
ENE	13612	PU-238	5.7E-10	1.0E-16	7.0E-17
ENE	13612	PU-239	7.3E-10	1.3E-16	8.9E-17
ENE	13612	PU-240	7.3E-10	1.3E-16	8.9E-17
ENE	13664	AM-241	1.6E-10	2.9E-17	2.0E-17
ENE	13664	CO-60	8.3E-09	1.5E-15	1.0E-15
ENE	13664	CS-137	4.2E-07	7.6E-14	5.2E-14
ENE	13664	BA-137M	1.1E-10	2.0E-17	5.6E-18
ENE	13664	EU-154	2.3E-09	4.1E-16	2.8E-16
ENE	13664	NI-63	1.3E-08	2.4E-15	1.6E-15
ENE	13664	PU-238	5.7E-10	1.0E-16	7.0E-17
ENE	13664	PU-239	7.3E-10	1.3E-16	8.9E-17
ENE	13664	PU-240	7.3E-10	1.3E-16	8.9E-17
ENE	13959	AM-241	1.5E-10	2.8E-17	1.9E-17
ENE	13959	CO-60	8.1E-09	1.5E-15	9.9E-16
ENE	13959	CS-137	4.1E-07	7.4E-14	5.1E-14
ENE	13959	BA-137M	9.1E-11	1.6E-17	4.7E-18
ENE	13959	EU-154	2.2E-09	4.0E-16	2.7E-16

ESTIMATED RADIONUCLIDE CONCENTRATIONS
AT VARIOUS LOCATIONS IN THE ENVIRONMENT

Wind Toward	Distance (meters)	Nuclide	Dry	Wet	Ground
			Air Concentration (pCi/m3)	Deposition Rate (pCi/cm2/s)	Deposition Rate (pCi/cm2/s)
ENE	13959	NI-63	1.3E-08	2.3E-15	3.9E-15
ENE	13959	PU-238	5.5E-10	1.0E-16	1.7E-16
ENE	13959	PU-239	7.1E-10	1.3E-16	2.1E-16
ENE	13959	PU-240	7.1E-10	1.3E-16	2.1E-16
ENE	14258	AM-241	1.5E-10	2.7E-17	4.6E-17
ENE	14258	CO-60	7.8E-09	1.4E-15	2.4E-15
ENE	14258	CS-137	4.0E-07	7.2E-14	1.2E-13
ENE	14258	BA-137M	7.4E-11	1.3E-17	1.7E-17
ENE	14258	EU-154	2.1E-09	3.9E-16	6.5E-16
ENE	14258	NI-63	1.2E-08	2.2E-15	3.8E-15
ENE	14258	PU-238	5.4E-10	9.7E-17	1.6E-16
ENE	14258	PU-239	6.9E-10	1.2E-16	2.1E-16
ENE	14258	PU-240	6.9E-10	1.2E-16	2.1E-16
ENE	14374	AM-241	1.5E-10	2.7E-17	4.5E-17
ENE	14374	CO-60	7.7E-09	1.4E-15	2.4E-15
ENE	14374	CS-137	4.0E-07	7.1E-14	1.2E-13
ENE	14374	BA-137M	6.9E-11	1.2E-17	1.6E-17
NE	14374	EU-154	2.1E-09	3.8E-16	6.5E-16
NE	14374	NI-63	1.2E-08	2.2E-15	3.7E-15
ENE	14374	PU-238	5.3E-10	9.5E-17	1.6E-16
ENE	14374	PU-239	6.8E-10	1.2E-16	2.1E-16
ENE	14374	PU-240	6.8E-10	1.2E-16	2.1E-16
ENE	15241	AM-241	1.4E-10	2.5E-17	4.2E-17
ENE	15241	CO-60	7.1E-09	1.3E-15	2.2E-15
ENE	15241	CS-137	3.6E-07	6.6E-14	1.1E-13
ENE	15241	BA-137M	3.9E-11	6.9E-18	9.0E-18
ENE	15241	EU-154	2.0E-09	3.5E-16	6.0E-16
ENE	15241	NI-63	1.1E-08	2.0E-15	3.5E-15
ENE	15241	PU-238	4.9E-10	8.8E-17	1.5E-16
ENE	15241	PU-239	6.3E-10	1.1E-16	1.9E-16
ENE	15241	PU-240	6.3E-10	1.1E-16	1.9E-16
ENE	15441	AM-241	1.3E-10	2.4E-17	4.1E-17
ENE	15441	CO-60	7.0E-09	1.3E-15	2.2E-15
ENE	15441	CS-137	3.6E-07	6.4E-14	1.1E-13
ENE	15441	BA-137M	3.4E-11	6.1E-18	7.9E-18
ENE	15441	EU-154	1.9E-09	3.5E-16	5.9E-16
ENE	15441	NI-63	1.1E-08	2.0E-15	3.4E-15
ENE	15441	PU-238	4.8E-10	8.6E-17	1.5E-16
ENE	15441	PU-239	6.1E-10	1.1E-16	1.9E-16
ENE	15441	PU-240	6.1E-10	1.1E-16	1.9E-16
ENE	15784	AM-241	1.3E-10	2.3E-17	4.0E-17
ENE	15784	CO-60	6.8E-09	1.2E-15	2.1E-15
ENE	15784	CS-137	3.5E-07	6.2E-14	1.1E-13
NE	15784	BA-137M	2.7E-11	4.9E-18	6.3E-18
NE	15784	EU-154	1.9E-09	3.3E-16	5.8E-16
ENE	15784	NI-63	1.1E-08	1.9E-15	3.3E-15
ENE	15784	PU-238	4.6E-10	8.4E-17	1.4E-16

ESTIMATED RADIONUCLIDE CONCENTRATIONS
AT VARIOUS LOCATIONS IN THE ENVIRONMENT

Wind Toward	Distance (meters)	Nuclide	Dry	Wet	Ground
			Air Concentration (pCi/m3)	Deposition Rate (pCi/cm2/s)	Deposition Rate (pCi/cm2/s)
ENE	15784	PU-239	6.0E-10	1.1E-16	7.7E-17
ENE	15784	PU-240	6.0E-10	1.1E-16	7.7E-17
ENE	15844	AM-241	1.3E-10	2.3E-17	1.7E-17
ENE	15844	CO-60	6.7E-09	1.2E-15	8.7E-16
ENE	15844	CS-137	3.4E-07	6.2E-14	4.5E-14
ENE	15844	BA-137M	2.6E-11	4.7E-18	1.4E-18
ENE	15844	EU-154	1.9E-09	3.3E-16	2.4E-16
ENE	15844	NI-63	1.1E-08	1.9E-15	1.4E-15
ENE	15844	PU-238	4.6E-10	8.3E-17	6.0E-17
ENE	15844	PU-239	5.9E-10	1.1E-16	7.7E-17
ENE	15844	PU-240	5.9E-10	1.1E-16	7.7E-17
ENE	16323	AM-241	1.2E-10	2.2E-17	1.6E-17
ENE	16323	CO-60	6.5E-09	1.2E-15	8.5E-16
ENE	16323	CS-137	3.3E-07	5.9E-14	4.3E-14
ENE	16323	BA-137M	1.9E-11	3.4E-18	1.0E-18
ENE	16323	EU-154	1.8E-09	3.2E-16	2.3E-16
ENE	16323	NI-63	1.0E-08	1.8E-15	1.3E-15
ENE	16323	PU-238	4.4E-10	8.0E-17	5.8E-17
ENE	16323	PU-239	5.7E-10	1.0E-16	7.4E-17
ENE	16323	PU-240	5.7E-10	1.0E-16	7.4E-17
ENE	17329	AM-241	1.1E-10	2.1E-17	1.5E-17
ENE	17329	CO-60	5.9E-09	1.1E-15	8.0E-16
ENE	17329	CS-137	3.0E-07	5.5E-14	4.1E-14
ENE	17329	BA-137M	9.8E-12	1.8E-18	5.6E-19
ENE	17329	EU-154	1.6E-09	2.9E-16	2.2E-16
ENE	17329	NI-63	9.4E-09	1.7E-15	1.3E-15
ENE	17329	PU-238	4.1E-10	7.3E-17	5.5E-17
ENE	17329	PU-239	5.2E-10	9.4E-17	7.0E-17
ENE	17329	PU-240	5.2E-10	9.4E-17	7.0E-17
NE	10344	AM-241	1.5E-09	2.8E-16	1.2E-16
NE	10344	CO-60	8.1E-08	1.5E-14	6.3E-15
NE	10344	CS-137	4.1E-06	7.4E-13	3.2E-13
NE	10344	BA-137M	1.9E-08	3.4E-15	8.1E-16
NE	10344	EU-154	2.2E-08	4.0E-15	1.7E-15
NE	10344	NI-63	1.3E-07	2.3E-14	9.9E-15
NE	10344	PU-238	5.5E-09	9.9E-16	4.3E-16
NE	10344	PU-239	7.1E-09	1.3E-15	5.5E-16
NE	10344	PU-240	7.1E-09	1.3E-15	5.5E-16
NE	10365	AM-241	1.5E-09	2.8E-16	1.2E-16
NE	10365	CO-60	8.0E-08	1.4E-14	6.2E-15
NE	10365	CS-137	4.1E-06	7.4E-13	3.2E-13
NE	10365	BA-137M	1.8E-08	3.3E-15	8.0E-16
NE	10365	EU-154	2.2E-08	4.0E-15	1.7E-15
NE	10365	NI-63	1.3E-07	2.3E-14	9.9E-15
NE	10365	PU-238	5.5E-09	9.9E-16	4.3E-16
NE	10365	PU-239	7.1E-09	1.3E-15	5.5E-16
NE	10365	PU-240	7.1E-09	1.3E-15	5.5E-16

ESTIMATED RADIONUCLIDE CONCENTRATIONS
AT VARIOUS LOCATIONS IN THE ENVIRONMENT

Wind Toward	Distance (meters)	Nuclide	Dry	Wet	Ground
			Air Concentration (pCi/m ³)	Deposition Rate (pCi/cm ² /s)	Deposition Rate (pCi/cm ² /s)
NE	10472	AM-241	1.5E-09	2.7E-16	1.2E-16
NE	10472	CO-60	7.9E-08	1.4E-14	6.2E-15
NE	10472	CS-137	4.0E-06	7.3E-13	3.2E-13
NE	10472	BA-137M	1.7E-08	3.1E-15	7.5E-16
NE	10472	EU-154	2.2E-08	3.9E-15	1.7E-15
NE	10472	NI-63	1.3E-07	2.3E-14	9.8E-15
NE	10472	PU-238	5.4E-09	9.8E-16	4.2E-16
NE	10472	PU-239	6.9E-09	1.3E-15	5.4E-16
NE	10472	PU-240	6.9E-09	1.3E-15	5.4E-16
NE	10590	AM-241	1.5E-09	2.7E-16	1.2E-16
NE	10590	CO-60	7.8E-08	1.4E-14	6.1E-15
NE	10590	CS-137	4.0E-06	7.2E-13	3.1E-13
NE	10590	BA-137M	1.6E-08	2.9E-15	7.0E-16
NE	10590	EU-154	2.1E-08	3.8E-15	1.7E-15
NE	10590	NI-63	1.2E-07	2.2E-14	9.7E-15
NE	10590	PU-238	5.3E-09	9.6E-16	4.2E-16
NE	10590	PU-239	6.8E-09	1.2E-15	5.4E-16
NE	10590	PU-240	6.8E-09	1.2E-15	5.4E-16
NE	11103	AM-241	1.4E-09	2.5E-16	1.1E-16
NE	11103	CO-60	7.3E-08	1.3E-14	5.8E-15
NE	11103	CS-137	3.7E-06	6.7E-13	3.0E-13
NE	11103	BA-137M	1.2E-08	2.1E-15	5.2E-16
NE	11103	EU-154	2.0E-08	3.6E-15	1.6E-15
NE	11103	NI-63	1.1E-07	2.1E-14	9.2E-15
NE	11103	PU-238	5.0E-09	8.9E-16	4.0E-16
NE	11103	PU-239	6.4E-09	1.1E-15	5.1E-16
NE	11103	PU-240	6.4E-09	1.1E-15	5.1E-16
NE	11989	AM-241	1.2E-09	2.2E-16	1.0E-16
NE	11989	CO-60	6.5E-08	1.2E-14	5.4E-15
NE	11989	CS-137	3.3E-06	6.0E-13	2.8E-13
NE	11989	BA-137M	6.6E-09	1.2E-15	3.1E-16
NE	11989	EU-154	1.8E-08	3.2E-15	1.5E-15
NE	11989	NI-63	1.0E-07	1.8E-14	8.5E-15
NE	11989	PU-238	4.4E-09	8.0E-16	3.7E-16
NE	11989	PU-239	5.7E-09	1.0E-15	4.7E-16
NE	11989	PU-240	5.7E-09	1.0E-15	4.7E-16
NE	13245	AM-241	1.1E-09	1.9E-16	9.4E-17
NE	13245	CO-60	5.6E-08	1.0E-14	4.9E-15
NE	13245	CS-137	2.9E-06	5.1E-13	2.5E-13
NE	13245	BA-137M	3.1E-09	5.5E-16	1.5E-16
NE	13245	EU-154	1.5E-08	2.8E-15	1.3E-15
NE	13245	NI-63	8.8E-08	1.6E-14	7.7E-15
NE	13245	PU-238	3.8E-09	6.9E-16	3.3E-16
NE	13245	PU-239	4.9E-09	8.8E-16	4.3E-16
NE	13245	PU-240	4.9E-09	8.8E-16	4.3E-16
NE	13286	AM-241	1.1E-09	1.9E-16	9.3E-17
NE	13286	CO-60	5.6E-08	1.0E-14	4.9E-15

ESTIMATED RADIONUCLIDE CONCENTRATIONS
AT VARIOUS LOCATIONS IN THE ENVIRONMENT

Wind Toward	Distance (meters)	Nuclide	Dry	Wet	Ground
			Air Concentration (pCi/m ³)	Deposition Rate (pCi/cm ² /s)	Deposition Rate (pCi/cm ² /s)
NE	13286	CS-137	2.8E-06	5.1E-13	2.5E-13
NE	13286	BA-137M	3.0E-09	5.4E-16	1.5E-16
NE	13286	EU-154	1.5E-08	2.7E-15	1.3E-15
NE	13286	NI-63	8.8E-08	1.6E-14	7.7E-15
NE	13286	PU-238	3.8E-09	6.9E-16	3.3E-16
NE	13286	PU-239	4.9E-09	8.8E-16	4.3E-16
NE	13286	PU-240	4.9E-09	8.8E-16	4.3E-16
NE	13483	AM-241	1.0E-09	1.9E-16	9.2E-17
NE	13483	CO-60	5.4E-08	9.8E-15	4.8E-15
NE	13483	CS-137	2.8E-06	5.0E-13	2.4E-13
NE	13483	BA-137M	2.7E-09	4.8E-16	1.3E-16
NE	13483	EU-154	1.5E-08	2.7E-15	1.3E-15
NE	13483	NI-63	8.6E-08	1.5E-14	7.6E-15
NE	13483	PU-238	3.7E-09	6.7E-16	3.3E-16
NE	13483	PU-239	4.8E-09	8.6E-16	4.2E-16
NE	13483	PU-240	4.8E-09	8.6E-16	4.2E-16
NE	13612	AM-241	1.0E-09	1.9E-16	9.1E-17
NE	13612	CO-60	5.4E-08	9.6E-15	4.7E-15
NE	13612	CS-137	2.7E-06	4.9E-13	2.4E-13
NE	13612	BA-137M	2.5E-09	4.4E-16	1.2E-16
NE	13612	EU-154	1.5E-08	2.6E-15	1.3E-15
NE	13612	NI-63	8.5E-08	1.5E-14	7.5E-15
NE	13612	PU-238	3.7E-09	6.6E-16	3.2E-16
NE	13612	PU-239	4.7E-09	8.5E-16	4.2E-16
NE	13612	PU-240	4.7E-09	8.5E-16	4.2E-16
NE	13664	AM-241	1.0E-09	1.8E-16	9.1E-17
NE	13664	CO-60	5.3E-08	9.6E-15	4.7E-15
NE	13664	CS-137	2.7E-06	4.9E-13	2.4E-13
NE	13664	BA-137M	2.4E-09	4.3E-16	1.2E-16
NE	13664	EU-154	1.5E-08	2.6E-15	1.3E-15
NE	13664	NI-63	8.4E-08	1.5E-14	7.5E-15
NE	13664	PU-238	3.7E-09	6.6E-16	3.2E-16
NE	13664	PU-239	4.7E-09	8.4E-16	4.1E-16
NE	13664	PU-240	4.7E-09	8.4E-16	4.1E-16
NE	13959	AM-241	9.9E-10	1.8E-16	8.9E-17
NE	13959	CO-60	5.2E-08	9.3E-15	4.6E-15
NE	13959	CS-137	2.6E-06	4.7E-13	2.4E-13
NE	13959	BA-137M	2.0E-09	3.6E-16	1.0E-16
NE	13959	EU-154	1.4E-08	2.5E-15	1.3E-15
NE	13959	NI-63	8.2E-08	1.5E-14	7.3E-15
NE	13959	PU-238	3.5E-09	6.4E-16	3.2E-16
NE	13959	PU-239	4.5E-09	8.2E-16	4.1E-16
NE	13959	PU-240	4.5E-09	8.2E-16	4.1E-16
NE	14258	AM-241	9.6E-10	1.7E-16	8.7E-17
NE	14258	CO-60	5.0E-08	9.0E-15	4.5E-15
NE	14258	CS-137	2.6E-06	4.6E-13	2.3E-13
NE	14258	BA-137M	1.7E-09	3.0E-16	8.5E-17

ESTIMATED RADIONUCLIDE CONCENTRATIONS
AT VARIOUS LOCATIONS IN THE ENVIRONMENT

Wind Toward	Distance (meters)	Nuclide	Dry	Wet	Ground
			Air Concentration (pCi/m ³)	Deposition Rate (pCi/cm ² /s)	Deposition Rate (pCi/cm ² /s)
NE	14258	EU-154	1.4E-08	2.5E-15	1.2E-15
NE	14258	NI-63	7.9E-08	1.4E-14	7.2E-15
NE	14258	PU-238	3.4E-09	6.2E-16	3.1E-16
NE	14258	PU-239	4.4E-09	7.9E-16	4.0E-16
NE	14258	PU-240	4.4E-09	7.9E-16	4.0E-16
NE	14374	AM-241	9.5E-10	1.7E-16	8.6E-17
NE	14374	CO-60	4.9E-08	8.9E-15	4.5E-15
NE	14374	CS-137	2.5E-06	4.5E-13	2.3E-13
NE	14374	BA-137M	1.5E-09	2.8E-16	8.0E-17
NE	14374	EU-154	1.4E-08	2.4E-15	1.2E-15
NE	14374	NI-63	7.8E-08	1.4E-14	7.1E-15
NE	14374	PU-238	3.4E-09	6.1E-16	3.1E-16
NE	14374	PU-239	4.3E-09	7.8E-16	3.9E-16
NE	14374	PU-240	4.3E-09	7.8E-16	3.9E-16
NE	15241	AM-241	8.7E-10	1.6E-16	8.1E-17
NE	15241	CO-60	4.5E-08	8.2E-15	4.2E-15
NE	15241	CS-137	2.3E-06	4.2E-13	2.2E-13
NE	15241	BA-137M	9.2E-10	1.7E-16	4.9E-17
NE	15241	EU-154	1.2E-08	2.2E-15	1.2E-15
NE	15241	NI-63	7.2E-08	1.3E-14	6.7E-15
NE	15241	PU-238	3.1E-09	5.6E-16	2.9E-16
NE	15241	PU-239	4.0E-09	7.2E-16	3.7E-16
NE	15241	PU-240	4.0E-09	7.2E-16	3.7E-16
NE	15441	AM-241	8.5E-10	1.5E-16	8.0E-17
NE	15441	CO-60	4.4E-08	8.0E-15	4.2E-15
NE	15441	CS-137	2.3E-06	4.1E-13	2.1E-13
NE	15441	BA-137M	8.2E-10	1.5E-16	4.4E-17
NE	15441	EU-154	1.2E-08	2.2E-15	1.1E-15
NE	15441	NI-63	7.0E-08	1.3E-14	6.6E-15
NE	15441	PU-238	3.0E-09	5.5E-16	2.9E-16
NE	15441	PU-239	3.9E-09	7.0E-16	3.7E-16
NE	15441	PU-240	3.9E-09	7.0E-16	3.7E-16
NE	15784	AM-241	8.3E-10	1.5E-16	7.8E-17
NE	15784	CO-60	4.3E-08	7.7E-15	4.1E-15
NE	15784	CS-137	2.2E-06	4.0E-13	2.1E-13
NE	15784	BA-137M	6.7E-10	1.2E-16	3.6E-17
NE	15784	EU-154	1.2E-08	2.1E-15	1.1E-15
NE	15784	NI-63	6.8E-08	1.2E-14	6.5E-15
NE	15784	PU-238	2.9E-09	5.3E-16	2.8E-16
NE	15784	PU-239	3.8E-09	6.8E-16	3.6E-16
NE	15784	PU-240	3.8E-09	6.8E-16	3.6E-16
NE	15844	AM-241	8.2E-10	1.5E-16	7.8E-17
NE	15844	CO-60	4.3E-08	7.7E-15	4.1E-15
NE	15844	CS-137	2.2E-06	3.9E-13	2.1E-13
NE	15844	BA-137M	6.5E-10	1.2E-16	3.5E-17
NE	15844	EU-154	1.2E-08	2.1E-15	1.1E-15
NE	15844	NI-63	6.8E-08	1.2E-14	6.4E-15

ESTIMATED RADIONUCLIDE CONCENTRATIONS
AT VARIOUS LOCATIONS IN THE ENVIRONMENT

Wind Toward	Distance (meters)	Nuclide	Dry	Wet	Ground
			Air Concentration (pCi/m ³)	Deposition Rate (pCi/cm ² /s)	Deposition Rate (pCi/cm ² /s)
NE	15844	PU-238	2.9E-09	5.3E-16	8.1E-16
NE	15844	PU-239	3.8E-09	6.8E-16	3.6E-16
NE	15844	PU-240	3.8E-09	6.8E-16	3.6E-16
NE	16323	AM-241	7.9E-10	1.4E-16	7.6E-17
NE	16323	CO-60	4.1E-08	7.4E-15	3.9E-15
NE	16323	CS-137	2.1E-06	3.8E-13	2.0E-13
NE	16323	BA-137M	4.9E-10	8.8E-17	2.7E-17
NE	16323	EU-154	1.1E-08	2.0E-15	1.1E-15
NE	16323	NI-63	6.5E-08	1.2E-14	6.2E-15
NE	16323	PU-238	2.8E-09	5.0E-16	2.7E-16
NE	16323	PU-239	3.6E-09	6.5E-16	3.5E-16
NE	16323	PU-240	3.6E-09	6.5E-16	3.5E-16
NE	17329	AM-241	7.2E-10	1.3E-16	7.1E-17
NE	17329	CO-60	3.7E-08	6.7E-15	3.7E-15
NE	17329	CS-137	1.9E-06	3.4E-13	1.9E-13
NE	17329	BA-137M	2.7E-10	4.9E-17	1.5E-17
NE	17329	EU-154	1.0E-08	1.8E-15	1.0E-15
NE	17329	NI-63	5.9E-08	1.1E-14	5.9E-15
NE	17329	PU-238	2.6E-09	4.6E-16	2.5E-16
NE	17329	PU-239	3.3E-09	5.9E-16	3.3E-16
NE	17329	PU-240	3.3E-09	5.9E-16	3.3E-16
NNE	10344	AM-241	7.7E-10	1.4E-16	1.1E-16
NNE	10344	CO-60	4.0E-08	7.2E-15	6.0E-15
NNE	10344	CS-137	2.0E-06	3.7E-13	3.0E-13
NNE	10344	BA-137M	1.6E-09	2.9E-16	7.5E-17
NNE	10344	EU-154	1.1E-08	2.0E-15	1.6E-15
NNE	10344	NI-63	6.4E-08	1.1E-14	9.4E-15
NNE	10344	PU-238	2.7E-09	4.9E-16	4.1E-16
NNE	10344	PU-239	3.5E-09	6.3E-16	5.2E-16
NNE	10344	PU-240	3.5E-09	6.3E-16	5.2E-16
NNE	10365	AM-241	7.7E-10	1.4E-16	1.1E-16
NNE	10365	CO-60	4.0E-08	7.2E-15	5.9E-15
NNE	10365	CS-137	2.0E-06	3.7E-13	3.0E-13
NNE	10365	BA-137M	1.6E-09	2.8E-16	7.4E-17
NNE	10365	EU-154	1.1E-08	2.0E-15	1.6E-15
NNE	10365	NI-63	6.3E-08	1.1E-14	9.4E-15
NNE	10365	PU-238	2.7E-09	4.9E-16	4.1E-16
NNE	10365	PU-239	3.5E-09	6.3E-16	5.2E-16
NNE	10365	PU-240	3.5E-09	6.3E-16	5.2E-16
NNE	10472	AM-241	7.6E-10	1.4E-16	1.1E-16
NNE	10472	CO-60	3.9E-08	7.1E-15	5.9E-15
NNE	10472	CS-137	2.0E-06	3.6E-13	3.0E-13
NNE	10472	BA-137M	1.4E-09	2.6E-16	6.8E-17
NNE	10472	EU-154	1.1E-08	1.9E-15	1.6E-15
NNE	10472	NI-63	6.3E-08	1.1E-14	9.3E-15
NNE	10472	PU-238	2.7E-09	4.9E-16	4.0E-16
NNE	10472	PU-239	3.5E-09	6.2E-16	5.2E-16

ESTIMATED RADIONUCLIDE CONCENTRATIONS
AT VARIOUS LOCATIONS IN THE ENVIRONMENT

Wind Toward	Distance (meters)	Nuclide	Dry	Wet	Ground
			Air Concentration (pCi/m ³)	Deposition Rate (pCi/cm ² /s)	Deposition Rate (pCi/cm ² /s)
NNE	10472	PU-240	3.5E-09	6.2E-16	5.2E-16
NNE	10590	AM-241	7.5E-10	1.3E-16	1.1E-16
NNE	10590	CO-60	3.9E-08	7.0E-15	5.8E-15
NNE	10590	CS-137	2.0E-06	3.6E-13	3.0E-13
NNE	10590	BA-137M	1.3E-09	2.4E-16	6.3E-17
NNE	10590	EU-154	1.1E-08	1.9E-15	1.6E-15
NNE	10590	NI-63	6.2E-08	1.1E-14	9.2E-15
NNE	10590	PU-238	2.7E-09	4.8E-16	4.0E-16
NNE	10590	PU-239	3.4E-09	6.1E-16	5.1E-16
NNE	10590	PU-240	3.4E-09	6.1E-16	5.1E-16
NNE	11103	AM-241	7.0E-10	1.3E-16	1.1E-16
NNE	11103	CO-60	3.6E-08	6.6E-15	5.5E-15
NNE	11103	CS-137	1.9E-06	3.4E-13	2.8E-13
NNE	11103	BA-137M	9.1E-10	1.6E-16	4.4E-17
NNE	11103	EU-154	1.0E-08	1.8E-15	1.5E-15
NNE	11103	NI-63	5.8E-08	1.0E-14	8.8E-15
NNE	11103	PU-238	2.5E-09	4.5E-16	3.8E-16
NE	11103	PU-239	3.2E-09	5.8E-16	4.9E-16
NE	11103	PU-240	3.2E-09	5.8E-16	4.9E-16
NNE	11989	AM-241	6.3E-10	1.1E-16	9.8E-17
NNE	11989	CO-60	3.3E-08	5.9E-15	5.1E-15
NNE	11989	CS-137	1.7E-06	3.0E-13	2.6E-13
NNE	11989	BA-137M	4.7E-10	8.5E-17	2.3E-17
NNE	11989	EU-154	9.0E-09	1.6E-15	1.4E-15
NNE	11989	NI-63	5.2E-08	9.4E-15	8.1E-15
NNE	11989	PU-238	2.3E-09	4.1E-16	3.5E-16
NNE	11989	PU-239	2.9E-09	5.2E-16	4.5E-16
NNE	11989	PU-240	2.9E-09	5.2E-16	4.5E-16
NNE	13245	AM-241	5.5E-10	9.9E-17	8.9E-17
NNE	13245	CO-60	2.9E-08	5.2E-15	4.6E-15
NNE	13245	CS-137	1.5E-06	2.6E-13	2.4E-13
NNE	13245	BA-137M	1.9E-10	3.5E-17	9.9E-18
NNE	13245	EU-154	7.9E-09	1.4E-15	1.3E-15
NNE	13245	NI-63	4.5E-08	8.2E-15	7.3E-15
NNE	13245	PU-238	2.0E-09	3.5E-16	3.2E-16
NNE	13245	PU-239	2.5E-09	4.5E-16	4.1E-16
NNE	13245	PU-240	2.5E-09	4.5E-16	4.1E-16
NNE	13286	AM-241	5.5E-10	9.9E-17	8.9E-17
NNE	13286	CO-60	2.9E-08	5.1E-15	4.6E-15
NNE	13286	CS-137	1.5E-06	2.6E-13	2.4E-13
NNE	13286	BA-137M	1.9E-10	3.4E-17	9.6E-18
NNE	13286	EU-154	7.8E-09	1.4E-15	1.3E-15
NNE	13286	NI-63	4.5E-08	8.2E-15	7.3E-15
NE	13286	PU-238	2.0E-09	3.5E-16	3.2E-16
NE	13286	PU-239	2.5E-09	4.5E-16	4.0E-16
NNE	13286	PU-240	2.5E-09	4.5E-16	4.0E-16
NNE	13483	AM-241	5.4E-10	9.7E-17	8.7E-17

ESTIMATED RADIONUCLIDE CONCENTRATIONS
AT VARIOUS LOCATIONS IN THE ENVIRONMENT

Wind Toward	Distance (meters)	Nuclide	Dry	Wet	Ground
			Air Concentration (pCi/m ³)	Deposition Rate (pCi/cm ² /s)	Deposition Rate (pCi/cm ² /s)
NNE	13483	CO-60	2.8E-08	5.0E-15	9.6E-15
NNE	13483	CS-137	1.4E-06	2.6E-13	4.9E-13
NNE	13483	BA-137M	1.6E-10	2.9E-17	8.4E-18
NNE	13483	EU-154	7.7E-09	1.4E-15	1.2E-15
NNE	13483	NI-63	4.4E-08	8.0E-15	7.2E-15
NNE	13483	PU-238	1.9E-09	3.5E-16	3.1E-16
NNE	13483	PU-239	2.5E-09	4.4E-16	4.0E-16
NNE	13483	PU-240	2.5E-09	4.4E-16	4.0E-16
NNE	13612	AM-241	5.3E-10	9.6E-17	8.6E-17
NNE	13612	CO-60	2.8E-08	5.0E-15	4.5E-15
NNE	13612	CS-137	1.4E-06	2.5E-13	2.3E-13
NNE	13612	BA-137M	1.5E-10	2.7E-17	7.7E-18
NNE	13612	EU-154	7.6E-09	1.4E-15	1.2E-15
NNE	13612	NI-63	4.4E-08	7.9E-15	7.1E-15
NNE	13612	PU-238	1.9E-09	3.4E-16	3.1E-16
NNE	13612	PU-239	2.4E-09	4.4E-16	4.0E-16
NNE	13612	PU-240	2.4E-09	4.4E-16	4.0E-16
NNE	13664	AM-241	5.3E-10	9.5E-17	8.6E-17
NNE	13664	CO-60	2.8E-08	5.0E-15	4.5E-15
NNE	13664	CS-137	1.4E-06	2.5E-13	2.3E-13
NNE	13664	BA-137M	1.4E-10	2.6E-17	7.4E-18
NNE	13664	EU-154	7.6E-09	1.4E-15	1.2E-15
NNE	13664	NI-63	4.4E-08	7.9E-15	7.1E-15
NNE	13664	PU-238	1.9E-09	3.4E-16	3.1E-16
NNE	13664	PU-239	2.4E-09	4.4E-16	3.9E-16
NNE	13664	PU-240	2.4E-09	4.4E-16	3.9E-16
NNE	13959	AM-241	5.1E-10	9.2E-17	8.4E-17
NNE	13959	CO-60	2.7E-08	4.8E-15	4.4E-15
NNE	13959	CS-137	1.4E-06	2.5E-13	2.2E-13
NNE	13959	BA-137M	1.2E-10	2.1E-17	6.1E-18
NNE	13959	EU-154	7.3E-09	1.3E-15	1.2E-15
NNE	13959	NI-63	4.2E-08	7.6E-15	7.0E-15
NNE	13959	PU-238	1.8E-09	3.3E-16	3.0E-16
NNE	13959	PU-239	2.3E-09	4.2E-16	3.9E-16
NNE	13959	PU-240	2.3E-09	4.2E-16	3.9E-16
NNE	14258	AM-241	5.0E-10	9.0E-17	8.2E-17
NNE	14258	CO-60	2.6E-08	4.7E-15	4.3E-15
NNE	14258	CS-137	1.3E-06	2.4E-13	2.2E-13
NNE	14258	BA-137M	9.4E-11	1.7E-17	5.0E-18
NNE	14258	EU-154	7.1E-09	1.3E-15	1.2E-15
NNE	14258	NI-63	4.1E-08	7.4E-15	6.8E-15
NNE	14258	PU-238	1.8E-09	3.2E-16	2.9E-16
NNE	14258	PU-239	2.3E-09	4.1E-16	3.8E-16
NNE	14258	PU-240	2.3E-09	4.1E-16	3.8E-16
NNE	14374	AM-241	4.9E-10	8.9E-17	8.2E-17
NNE	14374	CO-60	2.6E-08	4.6E-15	4.3E-15
NNE	14374	CS-137	1.3E-06	2.4E-13	2.2E-13

ESTIMATED RADIONUCLIDE CONCENTRATIONS
AT VARIOUS LOCATIONS IN THE ENVIRONMENT

Wind Toward	Distance (meters)	Nuclide	Dry	Wet	Ground
			Air Concentration (pCi/m3)	Deposition Rate (pCi/cm2/s)	Deposition Rate (pCi/cm2/s)
NNE	14374	BA-137M	8.7E-11	1.6E-17	4.6E-18
NNE	14374	EU-154	7.1E-09	1.3E-15	1.2E-15
NNE	14374	NI-63	4.1E-08	7.3E-15	6.7E-15
NNE	14374	PU-238	1.8E-09	3.2E-16	2.9E-16
NNE	14374	PU-239	2.3E-09	4.1E-16	3.7E-16
NNE	14374	PU-240	2.3E-09	4.1E-16	3.7E-16
NNE	15241	AM-241	4.6E-10	8.2E-17	7.7E-17
NNE	15241	CO-60	2.4E-08	4.3E-15	4.0E-15
NNE	15241	CS-137	1.2E-06	2.2E-13	2.0E-13
NNE	15241	BA-137M	4.7E-11	8.5E-18	2.6E-18
NNE	15241	EU-154	6.5E-09	1.2E-15	1.1E-15
NNE	15241	NI-63	3.8E-08	6.8E-15	6.4E-15
NNE	15241	PU-238	1.6E-09	2.9E-16	2.7E-16
NNE	15241	PU-239	2.1E-09	3.8E-16	3.5E-16
NNE	15241	PU-240	2.1E-09	3.8E-16	3.5E-16
NNE	15441	AM-241	4.5E-10	8.1E-17	7.6E-17
NNE	15441	CO-60	2.3E-08	4.2E-15	4.0E-15
NE	15441	CS-137	1.2E-06	2.1E-13	2.0E-13
NNE	15441	BA-137M	4.1E-11	7.4E-18	2.3E-18
NNE	15441	EU-154	6.4E-09	1.2E-15	1.1E-15
NNE	15441	NI-63	3.7E-08	6.7E-15	6.3E-15
NNE	15441	PU-238	1.6E-09	2.9E-16	2.7E-16
NNE	15441	PU-239	2.1E-09	3.7E-16	3.5E-16
NNE	15441	PU-240	2.1E-09	3.7E-16	3.5E-16
NNE	15784	AM-241	4.4E-10	7.8E-17	7.4E-17
NNE	15784	CO-60	2.3E-08	4.1E-15	3.9E-15
NNE	15784	CS-137	1.2E-06	2.1E-13	2.0E-13
NNE	15784	BA-137M	3.3E-11	5.9E-18	1.8E-18
NNE	15784	EU-154	6.2E-09	1.1E-15	1.1E-15
NNE	15784	NI-63	3.6E-08	6.5E-15	6.1E-15
NNE	15784	PU-238	1.6E-09	2.8E-16	2.7E-16
NNE	15784	PU-239	2.0E-09	3.6E-16	3.4E-16
NNE	15784	PU-240	2.0E-09	3.6E-16	3.4E-16
NNE	15844	AM-241	4.3E-10	7.8E-17	7.4E-17
NNE	15844	CO-60	2.3E-08	4.1E-15	3.9E-15
NNE	15844	CS-137	1.2E-06	2.1E-13	2.0E-13
NNE	15844	BA-137M	3.1E-11	5.6E-18	1.7E-18
NNE	15844	EU-154	6.2E-09	1.1E-15	1.1E-15
NNE	15844	NI-63	3.6E-08	6.4E-15	6.1E-15
NNE	15844	PU-238	1.5E-09	2.8E-16	2.6E-16
NNE	15844	PU-239	2.0E-09	3.6E-16	3.4E-16
NNE	15844	PU-240	2.0E-09	3.6E-16	3.4E-16
NNE	16323	AM-241	4.2E-10	7.5E-17	7.2E-17
NNE	16323	CO-60	2.2E-08	3.9E-15	3.7E-15
NE	16323	CS-137	1.1E-06	2.0E-13	1.9E-13
NNE	16323	BA-137M	2.2E-11	4.0E-18	1.3E-18
NNE	16323	EU-154	6.0E-09	1.1E-15	1.0E-15

Mar 11, 2003 07:56 pm

CONCEN
Page 62

ESTIMATED RADIONUCLIDE CONCENTRATIONS
AT VARIOUS LOCATIONS IN THE ENVIRONMENT

Wind Toward	Distance (meters)	Nuclide	Dry	Wet	Ground
			Air Concentration (pCi/m ³)	Deposition Rate (pCi/cm ² /s)	Deposition Rate (pCi/cm ² /s)
NNE	16323	NI-63	3.4E-08	6.2E-15	5.9E-15
NNE	16323	PU-238	1.5E-09	2.7E-16	2.6E-16
NNE	16323	PU-239	1.9E-09	3.4E-16	3.3E-16
NNE	16323	PU-240	1.9E-09	3.4E-16	3.3E-16
NNE	17329	AM-241	3.8E-10	6.9E-17	6.8E-17
NNE	17329	CO-60	2.0E-08	3.6E-15	3.5E-15
NNE	17329	CS-137	1.0E-06	1.8E-13	1.8E-13
NNE	17329	BA-137M	1.1E-11	2.0E-18	6.5E-19
NNE	17329	EU-154	5.5E-09	9.9E-16	9.7E-16
NNE	17329	NI-63	3.2E-08	5.7E-15	5.6E-15
NNE	17329	PU-238	1.4E-09	2.5E-16	2.4E-16
NNE	17329	PU-239	1.8E-09	3.2E-16	3.1E-16
NNE	17329	PU-240	1.8E-09	3.2E-16	3.1E-16

PM-2A Tank Remediation

CAP88 Output

Group #2 Radionuclides

Group #1 Distances

C A P 8 8 - P C

Version 2.00

Clean Air Act Assessment Package - 1988

S Y N O P S I S R E P O R T

Non-Radon Individual Assessment
Mar 12, 2003 09:34 pm

Facility: TAN/PM-2A tanks
Address: INEEL
City: Idaho Falls
State: ID Zip: 83401

Source Category: Point source
Source Type: Stack
Emission Year: 1995

Comments: Calcs. for remediation of PM-2A tanks

Effective Dose Equivalent
(mrem/year)

5.14E-04

At This Location: 10344 Meters Northeast
Dataset Name: TAN/PM-2A tanks
Dataset Date: Mar 12, 2003 09:34 pm
Wind File: C:\PROGRA~1\CAP88PC2\WNDFILES\TAN.WND

Mar 12, 2003 09:34 pm

SYNOPSIS
Page 1

MAXIMALLY EXPOSED INDIVIDUAL

Location Of The Individual: 10344 Meters Northeast
Lifetime Fatal Cancer Risk: 8.63E-09

ORGAN DOSE EQUIVALENT SUMMARY

Organ	Dose Equivalent (mrem/y)
GONADS	2.05E-05
BREAST	2.05E-05
R MAR	2.49E-03
LUNGS	1.41E-04
THYROID	2.05E-05
ENDOST	5.52E-03
RMNDR	8.13E-05
EFFEC	5.14E-04

RADIONUCLIDE EMISSIONS DURING THE YEAR 1995

Nuclide	Class	Size	Source	
			#1	TOTAL
SR-90		D	1.00	1.6E-02
Y-90		Y	1.00	1.6E-02
TH-228		Y	1.00	2.1E-07
U-233		Y	1.00	6.5E-06
U-234		Y	1.00	6.8E-06
U-235		Y	1.00	2.5E-07
U-236		Y	1.00	4.6E-08
U-238		Y	1.00	5.2E-08

SITE INFORMATION

Temperature: 21 degrees C
Precipitation: 25 cm/y
Mixing Height: 1000 m

Mar 12, 2003 09:34 pm

SYNOPSIS
Page 3

SOURCE INFORMATION

Source Number: 1

Stack Height (m): 1.
Diameter (m): 0.

Plume Rise
Pasquill Cat: A B C D E F G
Zero: 0. 0. 0. 0. 0. 0. 0.

AGRICULTURAL DATA

	Vegetable	Milk	Meat
Fraction Home Produced:	0.700	0.399	0.442
Fraction From Assessment Area:	0.300	0.601	0.558
Fraction Imported:	0.000	0.000	0.000

Food Arrays were not generated for this run.
Default Values used.

DISTANCES (M) USED FOR MAXIMUM INDIVIDUAL ASSESSMENT

10344	10365	10472	10590	11103	11989	13245	13286	13483	13612
13664	13959	14258	14374	15241	15441	15784	15844	16323	17329

C A P 8 8 - P C

Version 2.00

Clean Air Act Assessment Package - 1988

G E N E R A L D A T A

Non-Radon Individual Assessment
Mar 12, 2003 09:34 pm

Facility: TAN/PM-2A tanks
Address: INEEL
City: Idaho Falls
State: ID Zip: 83401

Source Category: Point source
Source Type: Stack
Emission Year: 1995

Comments: Calcs. for remediation of PM-2A tanks

Dataset Name: TAN/PM-2A tanks
Dataset Date: Mar 12, 2003 09:34 pm
Wind File: C:\PROGRA~1\CAP88PC2\WNDFILES\TAN.WND

VALUES FOR RADIONUCLIDE-DEPENDENT PARAMETERS

Nuclide	Clearance Class	Particle Size (microns)	Scavenging Coefficient (per second)	Dry Deposition Velocity (m/s)
SR-90	D	1.0	2.50E-06	1.80E-03
Y-90	Y	1.0	2.50E-06	1.80E-03
TH-228	Y	1.0	2.50E-06	1.80E-03
U-233	Y	1.0	2.50E-06	1.80E-03
U-234	Y	1.0	2.50E-06	1.80E-03
U-235	Y	1.0	2.50E-06	1.80E-03
U-236	Y	1.0	2.50E-06	1.80E-03
U-238	Y	1.0	2.50E-06	1.80E-03

VALUES FOR RADIONUCLIDE-DEPENDENT PARAMETERS

Nuclide	DECAY CONSTANT (PER DAY)			TRANSFER COEFFICIENT	
	Radio-active (1)	Surface	Water	Milk (2)	Meat (3)
SR-90	0.00E+00	5.48E-05	0.00E+00	1.50E-03	3.00E-04
Y-90	2.60E-01	5.48E-05	0.00E+00	2.00E-05	3.00E-04
TH-228	0.00E+00	5.48E-05	0.00E+00	5.00E-06	6.00E-06
U-233	0.00E+00	5.48E-05	0.00E+00	6.00E-04	2.00E-04
U-234	0.00E+00	5.48E-05	0.00E+00	6.00E-04	2.00E-04
U-235	0.00E+00	5.48E-05	0.00E+00	6.00E-04	2.00E-04
U-236	0.00E+00	5.48E-05	0.00E+00	6.00E-04	2.00E-04
U-238	0.00E+00	5.48E-05	0.00E+00	6.00E-04	2.00E-04

FOOTNOTES: (1) Effective radioactive decay constant in plume;
set to zero if less than 1.0E-2

(2) Fraction of animal's daily intake of nuclide
which appears in each L of milk (days/L)

(3) Fraction of animal's daily intake of nuclide
which appears in each kg of meat (days/kg)

VALUES FOR RADIONUCLIDE-DEPENDENT PARAMETERS

Nuclide	CONCENTRATION UPTAKE FACTOR		GI UPTAKE FRACTION	
	Forage (1)	Edible (2)	Inhalation	Ingestion
SR-90	2.50E+00	1.07E-01	3.00E-01	3.00E-01
Y-90	1.50E-02	2.57E-03	1.00E-04	1.00E-04
TH-228	8.50E-04	3.64E-05	2.00E-04	2.00E-04
U-233	8.50E-03	1.71E-03	2.00E-03	2.00E-01
U-234	8.50E-03	1.71E-03	2.00E-03	2.00E-01
U-235	8.50E-03	1.71E-03	2.00E-03	2.00E-01
U-236	8.50E-03	1.71E-03	2.00E-03	2.00E-01
U-238	8.50E-03	1.71E-03	2.00E-03	2.00E-01

FOOTNOTES: (1) Concentration factor for uptake of nuclide from soil for pasture and forage
(in pCi/kg dry weight per pCi/kg dry soil)

(2) Concentration factor for uptake of nuclide from soil by edible parts of crops
(in pCi/kg wet weight per pCi/kg dry soil)

Mar 12, 2003 09:34 pm

GENERAL
Page 4

DECAY CHAIN INGROWTH FACTORS

Nuclide	Parent(s)	Ingrowth Factor(s)
Y-90	SR-90	2.090E+03

VALUES FOR RADIONUCLIDE-INDEPENDENT PARAMETERS

HUMAN INHALATION RATE Cubic centimeters/hr	9.17E+05
SOIL PARAMETERS	
Effective surface density (kg/sq m, dry weight) (Assumes 15 cm plow layer)	2.15E+02
BUILDUP TIMES	
For activity in soil (years)	1.00E+02
For radionuclides deposited on ground/water (days)	3.65E+04
DELAY TIMES	
Ingestion of pasture grass by animals (hr)	0.00E+00
Ingestion of stored feed by animals (hr)	2.16E+03
Ingestion of leafy vegetables by man (hr)	3.36E+02
Ingestion of produce by man (hr)	3.36E+02
Transport time from animal feed-milk-man (day)	2.00E+00
Time from slaughter to consumption (day)	2.00E+01
WEATHERING	
Removal rate constant for physical loss (per hr)	2.90E-03
CROP EXPOSURE DURATION	
Pasture grass (hr)	7.20E+02
Crops/leafy vegetables (hr)	1.44E+03
AGRICULTURAL PRODUCTIVITY	
Grass-cow-milk-man pathway (kg/sq m)	2.80E-01
Produce/leafy veg for human consumption (kg/sq m)	7.16E-01
FALLOUT INTERCEPTION FRACTIONS	
Vegetables	2.00E-01
Pasture	5.70E-01
GRAZING PARAMETERS	
Fraction of year animals graze on pasture	4.00E-01
Fraction of daily feed that is pasture grass when animal grazes on pasture	4.30E-01

VALUES FOR RADIONUCLIDE-INDEPENDENT PARAMETERS

ANIMAL FEED CONSUMPTION FACTORS

Contaminated feed/forage (kg/day, dry weight) 1.56E+01

DAIRY PRODUCTIVITY

Milk production of cow (L/day) 1.10E+01

MEAT ANIMAL SLAUGHTER PARAMETERS

Muscle mass of animal at slaughter (kg) 2.00E+02

Fraction of herd slaughtered (per day) 3.81E-03

DECONTAMINATION

Fraction of radioactivity retained after washing for leafy vegetables and produce 5.00E-01

FRACTIONS GROWN IN GARDEN OF INTEREST

Produce ingested 1.00E+00

Leafy vegetables ingested 1.00E+00

INGESTION RATIOS:

IMMEDIATE SURROUNDING AREA/TOTAL WITHIN AREA

Vegetables 7.00E-01

Meat 4.42E-01

Milk 3.99E-01

MINIMUM INGESTION FRACTIONS FROM OUTSIDE AREA

(Minimum fractions of food types from outside area listed below are actual fixed values.)

Vegetables 0.00E+00

Meat 0.00E+00

Milk 0.00E+00

HUMAN FOOD UTILIZATION FACTORS

Produce ingestion (kg/y) 1.76E+02

Milk ingestion (L/y) 1.12E+02

Meat ingestion (kg/y) 8.50E+01

Leafy vegetable ingestion (kg/y) 1.80E+01

SWIMMING PARAMETERS

Fraction of time spent swimming 0.00E+00

Dilution factor for water (cm) 1.00E+00

C A P 8 8 - P C

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Clean Air Act Assessment Package - 1988

D O S E A N D R I S K E Q U I V A L E N T S U M M A R I E S

Non-Radon Individual Assessment
Mar 12, 2003 09:34 pm

Facility: TAN/PM-2A tanks
Address: INEEL
City: Idaho Falls
State: ID Zip: 83401

Source Category: Point source
Source Type: Stack
Emission Year: 1995

Comments: Calcs. for remediation of PM-2A tanks

Dataset Name: TAN/PM-2A tanks
Dataset Date: Mar 12, 2003 09:34 pm
Wind File: C:\PROGRA~1\CAP88PC2\WNDFILES\TAN.WND

ORGAN DOSE EQUIVALENT SUMMARY

Organ	Selected Individual (mrem/y)
GONADS	2.05E-05
BREAST	2.05E-05
R MAR	2.49E-03
LUNGS	1.41E-04
THYROID	2.05E-05
ENDOST	5.52E-03
RMNDR	8.13E-05
EFFEC	5.14E-04

PATHWAY EFFECTIVE DOSE EQUIVALENT SUMMARY

Pathway	Selected Individual (mrem/y)
INGESTION	4.73E-04
INHALATION	4.11E-05
AIR IMMERSION	1.85E-13
GROUND SURFACE	8.11E-09
INTERNAL	5.15E-04
EXTERNAL	8.11E-09
TOTAL	5.15E-04

NUCLIDE EFFECTIVE DOSE EQUIVALENT SUMMARY

Nuclide	Selected Individual (mrem/y)
SR-90	4.98E-04
Y-90	1.17E-06
TH-228	4.06E-07
U-233	6.98E-06
U-234	7.19E-06
U-235	2.48E-07
U-236	4.61E-08
U-238	4.87E-08
TOTAL	5.15E-04

CANCER RISK SUMMARY

Cancer	Selected Individual Total Lifetime Fatal Cancer Risk
LEUKEMIA	6.96E-09
BONE	7.83E-10
THYROID	9.02E-12
BREAST	7.66E-11
LUNG	3.21E-10
STOMACH	4.30E-11
BOWEL	2.23E-10
LIVER	7.38E-11
PANCREAS	4.78E-11
URINARY	2.75E-11
OTHER	5.84E-11
TOTAL	8.63E-09

PATHWAY RISK SUMMARY

Pathway	Selected Individual Total Lifetime Fatal Cancer Risk
INGESTION	7.95E-09
INHALATION	6.73E-10
AIR IMMERSION	4.29E-18
GROUND SURFACE	1.87E-13
INTERNAL	8.63E-09
EXTERNAL	1.87E-13
TOTAL	8.63E-09

NUCLIDE RISK SUMMARY

Nuclide	Selected Individual Total Lifetime Fatal Cancer Risk
SR-90	8.39E-09
Y-90	3.97E-11
TH-228	8.13E-12
U-233	8.91E-11
U-234	9.18E-11
U-235	3.24E-12
U-236	5.88E-13
U-238	6.27E-13
TOTAL	8.63E-09

INDIVIDUAL EFFECTIVE DOSE EQUIVALENT RATE (mrem/y)
(All Radionuclides and Pathways)

Distance (m)							
Direction	10344	10365	10472	10590	11103	11989	13245
N	2.0E-04	2.0E-04	1.9E-04	1.9E-04	1.9E-04	1.8E-04	1.6E-04
NNW	1.8E-04	1.8E-04	1.7E-04	1.7E-04	1.7E-04	1.6E-04	1.5E-04
NW	1.8E-04	1.8E-04	1.8E-04	1.8E-04	1.8E-04	1.7E-04	1.6E-04
WNW	1.9E-04	1.9E-04	1.9E-04	1.9E-04	1.8E-04	1.7E-04	1.6E-04
W	2.4E-04	2.4E-04	2.4E-04	2.4E-04	2.3E-04	2.2E-04	2.0E-04
WSW	3.2E-04	3.2E-04	3.2E-04	3.2E-04	3.0E-04	2.8E-04	2.6E-04
SW	4.5E-04	4.4E-04	4.4E-04	4.3E-04	4.1E-04	3.8E-04	3.4E-04
SSW	2.4E-04	2.4E-04	2.4E-04	2.3E-04	2.2E-04	2.1E-04	1.9E-04
S	9.7E-05	9.7E-05	9.7E-05	9.7E-05	9.5E-05	9.2E-05	8.9E-05
SSE	1.6E-04	1.6E-04	1.6E-04	1.6E-04	1.5E-04	1.4E-04	1.3E-04
SE	8.9E-05	8.9E-05	8.9E-05	8.9E-05	8.7E-05	8.5E-05	8.3E-05
ESE	8.1E-05	8.1E-05	8.0E-05	8.0E-05	7.9E-05	7.8E-05	7.6E-05
E	8.6E-05	8.5E-05	8.5E-05	8.5E-05	8.4E-05	8.2E-05	8.0E-05
ENE	1.4E-04	1.4E-04	1.4E-04	1.4E-04	1.3E-04	1.3E-04	1.2E-04
NE	5.1E-04	5.1E-04	5.1E-04	5.0E-04	4.7E-04	4.3E-04	3.9E-04
NNE	3.4E-04	3.4E-04	3.4E-04	3.4E-04	3.2E-04	3.0E-04	2.7E-04

Distance (m)							
Direction	13286	13483	13612	13664	13959	14258	14374
N	1.6E-04						
NNW	1.5E-04	1.5E-04	1.5E-04	1.5E-04	1.5E-04	1.4E-04	1.4E-04
NW	1.6E-04	1.5E-04	1.5E-04	1.5E-04	1.5E-04	1.5E-04	1.5E-04
WNW	1.6E-04	1.6E-04	1.6E-04	1.6E-04	1.6E-04	1.5E-04	1.5E-04
W	2.0E-04	2.0E-04	2.0E-04	2.0E-04	1.9E-04	1.9E-04	1.9E-04
WSW	2.6E-04	2.5E-04	2.5E-04	2.5E-04	2.5E-04	2.4E-04	2.4E-04
SW	3.4E-04	3.3E-04	3.3E-04	3.3E-04	3.2E-04	3.2E-04	3.1E-04
SSW	1.9E-04	1.9E-04	1.9E-04	1.9E-04	1.8E-04	1.8E-04	1.8E-04
S	8.8E-05	8.8E-05	8.8E-05	8.8E-05	8.7E-05	8.6E-05	8.6E-05
SSE	1.3E-04						
SE	8.3E-05	8.2E-05	8.2E-05	8.2E-05	8.2E-05	8.1E-05	8.1E-05
ESE	7.6E-05	7.6E-05	7.6E-05	7.6E-05	7.6E-05	7.5E-05	7.5E-05
E	8.0E-05	8.0E-05	7.9E-05	7.9E-05	7.9E-05	7.9E-05	7.8E-05
ENE	1.2E-04	1.2E-04	1.2E-04	1.2E-04	1.2E-04	1.1E-04	1.1E-04
NE	3.8E-04	3.8E-04	3.7E-04	3.7E-04	3.6E-04	3.6E-04	3.5E-04
NNE	2.7E-04	2.7E-04	2.6E-04	2.6E-04	2.6E-04	2.5E-04	2.5E-04

INDIVIDUAL EFFECTIVE DOSE EQUIVALENT RATE (mrem/y)
(All Radionuclides and Pathways)

	Distance (m)					
Direction	15241	15441	15784	15844	16323	17329
N	1.5E-04	1.5E-04	1.5E-04	1.5E-04	1.4E-04	1.4E-04
NNW	1.4E-04	1.4E-04	1.4E-04	1.4E-04	1.3E-04	1.3E-04
NW	1.4E-04	1.4E-04	1.4E-04	1.4E-04	1.4E-04	1.3E-04
WNW	1.5E-04	1.5E-04	1.4E-04	1.4E-04	1.4E-04	1.4E-04
W	1.8E-04	1.8E-04	1.8E-04	1.8E-04	1.7E-04	1.6E-04
WSW	2.3E-04	2.3E-04	2.2E-04	2.2E-04	2.2E-04	2.1E-04
SW	2.9E-04	2.9E-04	2.8E-04	2.8E-04	2.7E-04	2.6E-04
SSW	1.7E-04	1.7E-04	1.7E-04	1.6E-04	1.6E-04	1.5E-04
S	8.5E-05	8.4E-05	8.4E-05	8.4E-05	8.3E-05	8.2E-05
SSE	1.2E-04	1.2E-04	1.2E-04	1.2E-04	1.2E-04	1.1E-04
SE	8.0E-05	7.9E-05	7.9E-05	7.9E-05	7.8E-05	7.7E-05
ESE	7.4E-05	7.4E-05	7.4E-05	7.4E-05	7.4E-05	7.3E-05
E	7.7E-05	7.7E-05	7.7E-05	7.7E-05	7.6E-05	7.5E-05
ENE	1.1E-04	1.1E-04	1.1E-04	1.1E-04	1.1E-04	1.0E-04
NE	3.3E-04	3.3E-04	3.2E-04	3.2E-04	3.1E-04	2.9E-04
NNE	2.4E-04	2.4E-04	2.3E-04	2.3E-04	2.3E-04	2.1E-04

INDIVIDUAL LIFETIME RISK (deaths)
(All Radionuclides and Pathways)

Distance (m)							
Direction	10344	10365	10472	10590	11103	11989	13245
N	3.3E-09	3.3E-09	3.3E-09	3.2E-09	3.1E-09	3.0E-09	2.8E-09
NNW	3.0E-09	3.0E-09	2.9E-09	2.9E-09	2.8E-09	2.7E-09	2.5E-09
NW	3.1E-09	3.1E-09	3.1E-09	3.0E-09	2.9E-09	2.8E-09	2.6E-09
WNW	3.2E-09	3.2E-09	3.2E-09	3.1E-09	3.0E-09	2.9E-09	2.7E-09
W	4.1E-09	4.1E-09	4.0E-09	4.0E-09	3.8E-09	3.6E-09	3.4E-09
WSW	5.4E-09	5.4E-09	5.4E-09	5.3E-09	5.1E-09	4.7E-09	4.3E-09
SW	7.5E-09	7.5E-09	7.4E-09	7.3E-09	6.9E-09	6.4E-09	5.7E-09
SSW	4.0E-09	4.0E-09	4.0E-09	3.9E-09	3.8E-09	3.5E-09	3.2E-09
S	1.6E-09	1.6E-09	1.6E-09	1.6E-09	1.6E-09	1.5E-09	1.5E-09
SSE	2.7E-09	2.7E-09	2.7E-09	2.7E-09	2.6E-09	2.4E-09	2.3E-09
SE	1.5E-09	1.5E-09	1.5E-09	1.5E-09	1.5E-09	1.4E-09	1.4E-09
ESE	1.4E-09	1.4E-09	1.3E-09	1.3E-09	1.3E-09	1.3E-09	1.3E-09
E	1.4E-09	1.4E-09	1.4E-09	1.4E-09	1.4E-09	1.4E-09	1.3E-09
ENE	2.4E-09	2.3E-09	2.3E-09	2.3E-09	2.2E-09	2.1E-09	2.0E-09
NE	8.6E-09	8.6E-09	8.5E-09	8.4E-09	7.9E-09	7.3E-09	6.5E-09
NNE	5.8E-09	5.8E-09	5.7E-09	5.6E-09	5.4E-09	5.0E-09	4.6E-09

Distance (m)							
Direction	13286	13483	13612	13664	13959	14258	14374
N	2.8E-09	2.7E-09	2.7E-09	2.7E-09	2.7E-09	2.6E-09	2.6E-09
NNW	2.5E-09	2.5E-09	2.5E-09	2.5E-09	2.4E-09	2.4E-09	2.4E-09
NW	2.6E-09	2.6E-09	2.6E-09	2.6E-09	2.5E-09	2.5E-09	2.5E-09
WNW	2.7E-09	2.7E-09	2.7E-09	2.7E-09	2.6E-09	2.6E-09	2.6E-09
W	3.3E-09	3.3E-09	3.3E-09	3.3E-09	3.2E-09	3.2E-09	3.2E-09
WSW	4.3E-09	4.3E-09	4.2E-09	4.2E-09	4.1E-09	4.1E-09	4.0E-09
SW	5.7E-09	5.6E-09	5.5E-09	5.5E-09	5.4E-09	5.3E-09	5.2E-09
SSW	3.2E-09	3.2E-09	3.1E-09	3.1E-09	3.1E-09	3.0E-09	3.0E-09
S	1.5E-09	1.5E-09	1.5E-09	1.5E-09	1.5E-09	1.5E-09	1.4E-09
SSE	2.3E-09	2.2E-09	2.2E-09	2.2E-09	2.2E-09	2.2E-09	2.1E-09
SE	1.4E-09						
ESE	1.3E-09						
E	1.3E-09						
ENE	2.0E-09	2.0E-09	2.0E-09	2.0E-09	1.9E-09	1.9E-09	1.9E-09
NE	6.5E-09	6.3E-09	6.3E-09	6.3E-09	6.1E-09	6.0E-09	5.9E-09
NNE	4.5E-09	4.5E-09	4.4E-09	4.4E-09	4.3E-09	4.3E-09	4.2E-09

INDIVIDUAL LIFETIME RISK (deaths)
(All Radionuclides and Pathways)

Direction	Distance (m)					
	15241	15441	15784	15844	16323	17329
N	2.5E-09	2.5E-09	2.5E-09	2.5E-09	2.4E-09	2.3E-09
NNW	2.3E-09	2.3E-09	2.3E-09	2.3E-09	2.2E-09	2.2E-09
NW	2.4E-09	2.4E-09	2.4E-09	2.4E-09	2.3E-09	2.2E-09
WNW	2.5E-09	2.5E-09	2.4E-09	2.4E-09	2.4E-09	2.3E-09
W	3.0E-09	3.0E-09	3.0E-09	2.9E-09	2.9E-09	2.8E-09
WSW	3.8E-09	3.8E-09	3.7E-09	3.7E-09	3.6E-09	3.4E-09
SW	4.9E-09	4.9E-09	4.8E-09	4.7E-09	4.6E-09	4.3E-09
SSW	2.8E-09	2.8E-09	2.8E-09	2.8E-09	2.7E-09	2.6E-09
S	1.4E-09	1.4E-09	1.4E-09	1.4E-09	1.4E-09	1.4E-09
SSE	2.1E-09	2.0E-09	2.0E-09	2.0E-09	2.0E-09	1.9E-09
SE	1.3E-09	1.3E-09	1.3E-09	1.3E-09	1.3E-09	1.3E-09
ESE	1.3E-09	1.2E-09	1.2E-09	1.2E-09	1.2E-09	1.2E-09
E	1.3E-09	1.3E-09	1.3E-09	1.3E-09	1.3E-09	1.3E-09
ENE	1.8E-09	1.8E-09	1.8E-09	1.8E-09	1.8E-09	1.7E-09
NE	5.5E-09	5.5E-09	5.3E-09	5.3E-09	5.2E-09	4.8E-09
NNE	4.0E-09	4.0E-09	3.9E-09	3.9E-09	3.8E-09	3.6E-09